

# CONTRIBUTIONS TO MIDWIFERY,

AND

## Diseases of Women and Children,

WITH A

### REPORT ON THE PROGRESS OF OBSTETRICS,

AND

### UTERINE AND INFANTILE PATHOLOGY IN 1858.

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BY

E. NOEGGERATH, M.D., AND A. JACOBI, M.D.

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## P R E F A C E .

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DISEASES of women and children have, in the last century, received great attention from physicians, both on this Continent and in Europe, and so much has been written of late upon this branch of our science, that an author or student of the present day is at a loss how to make himself acquainted with all that exists on the subject. This difficulty is increased by the absence of a journal giving a knowledge of previous works on uterine and infantile pathology. Although we are in possession of very valuable retrospects on medicine in general, it must be admitted that their tendency and size are such as to exclude anything like completeness. While in the books referred to, general pathology of so-called internal and surgical diseases is treated of at sufficient length, the chapters on obstetrics, uterine and infantile pathology are dealt with in a rather off-hand manner. The necessity of a book, intended to supply this want, will be readily understood by every one who feels a desire to make himself acquainted with the progress of science, but more particularly to those of our brethren who feel called upon to write articles of their own. In preparing this book, we were more and more impressed with the truth of this remark. A perusal of our periodicals reveals a frightful state of ignorance as to what has come before, and thus a vast amount of labor is wasted by the publication of so-called new facts and theories, which might be more usefully employed, if the

books, already there, were more generally known. This was, hitherto, a very difficult task, because we were in want of a book which should contain the essence of all that is dispersed in hundreds of publications, written in a great variety of languages. In preparing a work of this kind, we have endeavored, at least, to give *an account of every original article, or monograph, that appeared to be of any importance* ; while we have tried also, to mention, at least, *the headings of those of less value, or beyond our reach*. From 1858, we intend to keep up a review of every successive year, especially with regard to German literature, provided that it should meet with the approval of the profession.

The report is preceded by a number of original articles, which will, we think, repay a perusal.

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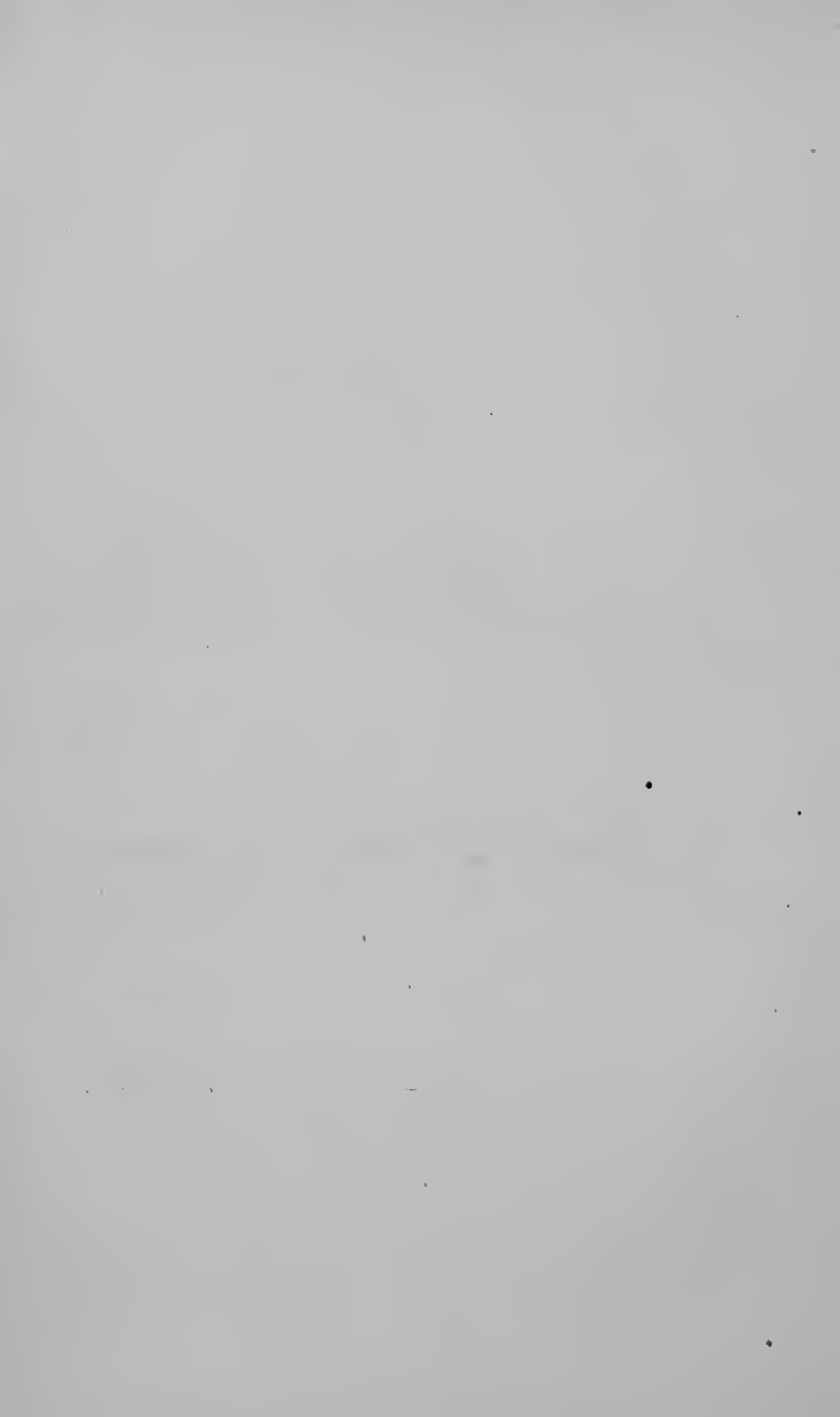
PART I.

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CONTRIBUTIONS TO MIDWIFERY,

AND

Diseases of Women and Children.



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## ARTICLE I.

*Three Cases of Induction of Premature Labor performed in New York after Cohen's Method. With Remarks by E. NOEGGERATH, M.D.*

When I published my first case of induction of premature labor performed in this city, I said : " The time will come, and is rapidly drawing near, in this country, that the average number of labors ending naturally, without operative assistance, will lessen, in a remarkable degree. The immense immigration of a far from wealthy and well-shaped people on the one hand, and the strong tendency to high city life on the other, must show their influence upon the coming generations." Two years have elapsed since the above was written, and in this short period I have had ample occasion to see the truth of my former remarks exemplified. I have to add an account of two other cases in which Dr. Cohen's method was successfully employed—a method, the full value of which I desire to demonstrate to the profession. I hope to see the day that it will supplant the douche, rupture of the membranes and ergot in America, England, and France, as it is doing in Germany.

\* **Case 1.**—Mrs. G. M., born in Germany, living now in New York, presents, in her external appearance, the form of a healthy, well-shaped female, though she is of a rather short stature, and exhibits, on a closer examination, the well-known form of knock-kneed rhachitic lower extremities.

In her first confinement, which took place about fourteen months ago, she was attended by Dr. G. C. E. Weber. This eminent practitioner was compelled, to perform the operation of craniotomy, in consequence of the malformation of the pelvis. He advised her then to be delivered artificially, before the full term, in case of a second pregnancy, not only for her own safety, but because it would afford a chance of her having a living child. The latter circumstance being of considerable importance, induced the lady to follow the advice of her physician. Conception again took place at the end of October, or the beginning of November,

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\* *New York Journal of Medicine*, for July, 1856.

1855, for, at that period, her courses, always regular, ceased. She expected, therefore, to be confined during the first week of August, 1856, with which statement we could thoroughly agree upon a first examination made towards the end of May. The superior margin of the fundus uteri was then found between the umbilicus and the processus xiphoides, the womb being equally developed on both sides. The foetal pulsations we could easily observe on the right side, at a level with the umbilicus, while the feet were distinctly felt near the left upper portion of the uterus. Corresponding results were obtained by a vaginal exploration. The pregnancy was decided to have advanced to the end of the eighth lunar month, with a large-sized living child, having a cranial presentation.

The pelvis was a model of rhachitic deformity. The promontory of the sacrum protruding forward and towards the left side of the pelvic cavity, diminished the antero-posterior diameter to  $2\frac{1}{2}$ – $2\frac{3}{4}$  inches, while the lateral diameter remained unchanged in extent; the outlet of the small pelvis was rather enlarged in consequence of the widely open pubic arch and the flattening of the sacral curvature. The whole basin presented but a very small degree of inclination. The general state of health of the patient was satisfactory. On Monday, 2nd June, about 11 o'clock in the morning, Dr. G. C. E. Weber and myself proceeded to perform the operation of inducing labor after the method of Schweighäuser, Cohen. The woman was placed upon her back with the nates projecting somewhat over the edge of the bed, and the feet supported by two chairs; an elastic catheter, of the ordinary size, was introduced into the mouth of the uterus, and pushed upwards, with the intention of bringing the instrument between the anterior wall of the uterus, and the foetal membranes;—the point of it entered the womb to the extent of about four inches—then, with a syringe adjusted to it, we injected about seven ounces of water, heated to  $90^{\circ}$  or  $100^{\circ}$  Fahrenheit. As soon as the fluid touched the internal surface of the uterus, the woman complained of uneasy feeling in the abdomen, and we distinctly felt the uterus in a state of rigidity, which lasted for several minutes. After a time, the finger was removed from the external opening of the catheter, when a portion of the water was rejected through the instrument with considerable force. The withdrawal of the tube was followed by another escape of some water. During the following thirty minutes, the

uterus was in an almost continual state of contraction with but very few and short intermissions of flaccidity. Besides a slight degree of excitement and little headache, the woman's state of health, as well as her pulse, proved to be unchanged. Towards noon the pains grew stronger, but less in frequency, with longer intervals.

At about seven o'clock in the night, the pain lessened in a degree that we thought it proper to make another injection. This was applied in the same way with the exception that we did not change the ordinary position of the patient in her bed, because the lips of the os uteri were already so much retracted by the previous pains, that the introduction of the catheter would meet with no difficulty at all. Whether the water was injected with a somewhat greater force than at the first time we cannot decide, but it all remained in the uterus, and the operation was followed by a sudden enlargement of the womb. Mrs. M., experienced a very distressing pain in her abdomen; much more so than she did at the former injections. It made such an impression upon her system that she fell into an almost unconscious state; the pulse sunk suddenly, so as to be scarcely perceptible; her face instantly became purple, and her breathing very much embarrassed. Half an hour later, when she recovered from these symptoms, she was seized with a violent chill, which lasted for nearly two hours. This was followed by a feverish condition, general heat, and a pulse of 130 in a minute. This alarming state gradually subsided, and a renewed succession of strong uterine contractions commenced. At seven o'clock, A. M., of the following day, we were told that she endured almost incessant and very severe labor pains during the last night. At this time we found that the vaginal cervix had disappeared completely, the os uteri was opened to the size of a silver dollar, the well-filled bag protruded into the vagina with every recurring pain. Now we could ascertain, beyond question, a vertex presentation. At nine o'clock, A. M., the os uteri dilated to its full extent, and the membranous cyst broke while it was protruded almost to the external orifice. At that time, the vertex was just engaged in the entrance of the pelvis. Passing over the very interesting peculiarities of this cranial parturition, it will be sufficient to say, that it required a full hour of time to bring the head down through the brim of the small pelvis, notwithstanding those tremendous pains, which are only witnessed with rhachitic

females. But when the greatest circumference of the cranium had passed the upper part of the pelvis, then one of these violent pains was sufficient to drive the head through the whole cavity, and at once out of the labia externa up to the shoulders. The entire puration, from the time of the first injection, was achieved in less than twenty-four hours.

The child, though born in a weak condition, was soon brought to the most satisfactory state of breathing and crying. After the placenta was removed by the ordinary manipulations, the uterus proved to be well contracted. The mother's condition was satisfactory, and has continued favorable.

**Case 2.**—Mrs. L——, of Sixth Avenue, New York, born of a German mother, who, although of a very small stature, lived to the age of sixty in average good health, and died rather suddenly from a disease of the chest. The only sister of our patient went through several easy confinements. Mrs. L., had the first menstrual flux when eighteen years old, and this continued regular up to the time of her marriage, which occurred in January, 1855. She soon became *enciente*, and was taken in labor in February, 1856. Dr. Michaelis, who attended her on that occasion, recognized a contraction of the pelvis and a cross presentation of the child, its head being situated near the left iliac region; thirty-six hours after the beginning of labor, Dr. M. turned the child by the feet, extracted it, and delivered the head by means of a forceps. The child died during this series of operations. The mother recovered promptly. On March 7, 1857, Mrs. L. fell in labor with her second child, and was attended by Dr. S——l, who tried to deliver the child by a forceps operation, but could not succeed, owing to considerable contraction of the pelvis. Another physician was called in to assist, and finally a dead child was delivered by the forceps. Thus the mother's hope of having a living offspring was twice blighted. During her next pregnancy, she learned from her acquaintances that she might have a living child by being delivered at a time prior to the full term, and she was at once resolved to try her chances. With a view of having premature confinement induced, she applied to Dr. Krackowizer, and to no worthier man could she have trusted her own life and that of her child. This gentleman, to whom I am indebted for the particulars of the case, invited me to see Mrs. L. in consultation. We met at the patient's residence, June 26, 1858, and



learned that she was last unwell at the time of the Jewish New-Year (September 19, 1857), and that she quickened near the end of February, 1858. The woman was of dark complexion, and very short of stature, measuring from head to feet only four feet six inches, the bones of the entire skeleton being rather short and massive, more especially the epiphyses. From the strong inclination of the pelvis, the lower part of the backbone stands out in a remarkable way, while the lumbar portion of the vertebral column is apparently curved in a forward direction. The measurement of the pelvis with Baudelocque's calipers presented the following data:

Distance of both spinæ anter. sup. . . . .	9 $\frac{3}{4}$ inches.
“ “ trochanters, . . . . .	12 “
External Conjugata, . . . . .	6 $\frac{1}{2}$ “
Conjugata, . . . . .	3 $\frac{3}{8}$ “

By internal examination the promontorium could be easily detected, it being directed somewhat towards the right side of the pelvis, thus allowing a larger space for the left pelvic excavation. The os tinæ was directed considerably backwards, almost touching the os sacrum, both external and internal orifices permeable to the finger; laquear vaginæ empty, head found floating towards the left iliac region; lower part of the pelvis and outlet spacious; uterus considerably anteverted.

Thus we had to deal with a markedly rhachitic pelvis, and an antero-posterior diameter of the brim of three inches and odd lines. This disposition, taken together with the history of her two previous confinements, induced us to comply with her wish to have premature labor induced as the only chance of having a living child. She, therefore, was placed across the bed, the feet being supported by two chairs. By gently pushing the fundus uteri backwards, the os tinæ was brought more fully in a direction corresponding with the axis of the pelvis, and an elastic English catheter, with a metallic mandrin was introduced into the cavity of the womb, between its anterior wall and the membranes, as far as one and one-half inches, as it was impossible to push it any further without using considerable force. Through it about three ounces of warm water were injected and instantly expelled beneath the instrument. This was repeated with the same result. We now withdrew the catheter and introduced it again in a somewhat different direction. By this manœuvre, the catheter

could be introduced considerably further upwards, and the full amount of the injected water was retained. Immediately after this, the uterus became hard and rigid, and the patient had to press downwards as if in labor pains, which lasted for about half a minute. The patient was now ordered to rise and walk about the room. No water was discharged. From half-past nine, A. M., June 8th, when the first injection was made until half-past ten, A. M., she experienced four well-marked though feeble pains. From this time up to half-past nine, P. M., regular labor pains, increasing in strength and rapidity of succession, were observed, and with almost every one of them a small quantity of water was discharged. Still their influence upon the os uteri was as yet very insignificant, being dilated to about the size of a two shilling piece. Towards midnight the pains grew very strong, and at about three, A. M., a large quantity of water was discharged with one forcing pain. Dr. Krackowizer saw the patient at four, A. M., and found the right scapula presenting (in front), head towards the left side; foetal pulsations easily perceptible on the left side of the abdomen below the umbilicus. The patient was placed under chloroform, when the doctor turned the child by one foot and extracted it, except the head. The operation of turning was attended with some difficulties, and could not be performed as quickly as was desirable. The head itself proved too large to be extracted in the usual way, and consequently the forceps was applied, and thus the child was delivered. It proved to be still-born, and, although every effort was made to revive it, life could not be restored. The mother did perfectly well and was up after the ninth day.

From the appearance of the child it became evident that the gestation was more advanced than we supposed, from the account given by the parents, or from the results of the obstetric examination; the peculiar displacement and formation of the uterus hindering a fair estimate.

Full length of the foetus,	. . . . .	16	inches.
Lateral diameter of the head	. . . . .	3	"
Antero-posterior,	. . . . .	4	"
Vertical,	. . . . .	4	"
Long diagonal	. . . . .	5½	"
Distance of shoulders,	. . . . .	5	"
" " trochanters,	. . . . .	3¼	"

**Case 3.**—In July last I was called to see Mrs. N., of Sullivan Street, in consultation with Dr. Shnetter, of this city. Here I found a lady confined to bed for the last three weeks, and unable to walk more than a few steps, owing to an oedematous swelling of her almost entire body. Both legs were swollen, and stiff with serous effusion as high as the abdomen, as also her arms and face. The urine tested by heat and nitric acid, became instantly thick, giving a very copious sediment, consisting of albumen. The microscopical examination conducted previously by Dr. Shnetter, confirmed the chemical analysis; numerous fibrinous casts, as well as epithelial cells from the kidneys, filled with a fatty detritus, having been detected by this gentleman. We therefore considered Mrs. N. suffering from far advanced degeneration of the kidneys and consequent anasarca. From her previous history, it appeared that similar symptoms, although in a less remarkable degree, had occurred in a former pregnancy, and she had been taken with eclamptic convulsions at the time of her last labor. She was now about six months gone, and we most naturally concluded, that if pregnancy was allowed to proceed up to the full term, she would not only be subject to eclampsia, but it even seemed more than probable, that the disease, advanced as it was, would gradually undermine her system, or destroy her by a sudden attack of oedema pulmonum or pericardii. It was, therefore, resolved to interrupt pregnancy as the only chance of saving, or rather prolonging her life. At five o'clock in the afternoon, we introduced an elastic catheter between the membranes and the walls of the uterus, about four inches, and injected five ounces of tepid water. No reaction took place at first, and it was not until two hours after the injection was performed, that the patient was taken in labor. From this time the pains came on slowly, but steadily, and, during the night, effected a gradual dilatation of the os. At about nine o'clock, A. M., on the following morning, the os was fully dilated. Upon rupture of the membranes, the child presented with the back, when Dr. Shnetter turned and extracted a small immature foetus, which expired after a few ineffectual efforts at respiration. The mother advanced very slowly towards recovery, but she finally convalesced, and is able again to attend to her household duties.

These are the three cases of induction of premature labor performed—after Cohen's method, in the city of New York. The only

case on record, where this method was made use of in the United States, is that of Dr. Blatchford, an account of which was read before the Rensselaer County Medical Society, at the Semi-Annual meeting, January 7, 1850, and published in the *New York Journal of Medicine*, N. S., Vol. IV., No. II., March, 1850. It was performed at the seventh month of gestation, on account of contracted pelvis. We give a condensed extract from Dr. Blatchford's valuable paper.

Mrs. M. has been delivered twice with the perforator, because the pelvis was so contracted in all its diameters, that the children could not be removed alive with the forceps. Therefore, on Wednesday, 5th of December, ten o'clock, A. M., being just seven months since she was last unwell, and two and a half since she quickened, everything being in readiness, with the assistance of Dr. Robbins, half a pint of "tar water" was injected into the womb through a large sized male catheter, moderately curved, and by means of the syringe of a common self-injecting apparatus. The catheter passed without the least resistance from two to two and a half inches within the uterus, occasioning not the slightest pain. After remaining about ten minutes in a recumbent posture, she was permitted to get up, which she did, and moved about the house as usual, experiencing no other inconvenience than a constant draining from the vagina, of a small quantity of a fluid slightly tinged with blood, and tainted with tar, and a sense of weight, as if, to use her own expression, "the child had settled down." Nothing unusual occurred until Friday evening, the seventh, when she was suddenly taken with a chill and rigor, which lasted nearly two hours, accompanied with severe headache. It was succeeded by slight fever. Saturday morning she was very comfortable, with the exception of the slight draining before mentioned. At eleven o'clock, however, and after the operation of a cathartic previously given, she was taken in labor. The pains at first were few and far between, until about one o'clock, P. M., when they became quite violent and frequent. At two o'clock the membranes gave way during a hard pain, and a very large quantity of water was discharged. The effect of this large evacuation was, to give almost entire relief from pain. By a little after eight o'clock, Sabbath morning, her pains again returned, and they soon became very regular, but it was not until noon that dilatation could be

said to have fairly commenced ; by eight o'clock, the head could be felt forcing its way through the upper strait. From this time until about one o'clock the pains were very severe, and yet very little progress had apparently been made toward the completion of labor. The patient, hitherto firm, began to manifest signs of restlessness and impatience, and her spirits evidently began to flag. Still Dr. Blatchford left the case to nature, and at half-past two, A. M. (113 hours from the time the tar water was injected) she was delivered of a plump and vigorous child, loudly vociferating its own advent. It weighed nearly four pounds ; the placenta soon followed. The mother recovered without any unpleasant symptoms whatsoever, and had the satisfaction of nursing her own infant.

From an analysis of these four operations performed in the United States, or rather in the Empire State, the following table may be drawn :

AUTHORS.	Number of Injections.	Time of Labor after first Injection.	Fate of Children.	Fate of Mothers.	Reason for Operation.	REMARKS.
Blatchford..	1	113 hours.	Alive.	Recovery.	Contracted pelvis.	Cranial presentation.
Noeggerath	2	23 hours.	Alive.	Recovery.	Contracted pelvis.	Cranial presentation.
Noeggerath	1	19 hours.	Dead.	Recovery.	Contracted pelvis.	Cross presentation. Turning.
Noeggerath	1	16 hours.	Died soon after birth.	Recovery.	Morbus brightii.	Cross presentation. Turning.

This limited number of observations is, of course, insufficient for a final discussion with regard to the value of the method, but added to the statistics already known, they will throw additional light upon the operation, and tend to determine its true position. The first man who conceived the idea of inducing premature labor by injection of water into the uterus, was Dr. Tac. Fried. Schweighäuser, of Strassburg. In his excellent work, "*Das Gebären nach der beobachteten Natur*," etc., Strassburg and Leipzig, 1825 ; he recommends to throw a quantity of warm water into the womb for that purpose. But, as he never seems to have practiced it, we must attribute the whole merit to Dr. H. M. Cohen, of Hamburg, who first introduced this proceeding into practice. He called the attention of the profession to this method in a thesis written in the year 1846. Since this time, we have

through the different medical journals, accounts of upwards of sixty cases in which Dr. Cohen's directions were imitated, all of which are very favorable to the operation. From a perusal of monographs and periodicals, I have been able to collect sixty-two cases (Birnbaum, seven ; Credé, three ; Cohen, seven ; Steitz, ten ; Naegele, one ; Harting, two ; Kilian, two ; Ritgen, one ; Germann, nine ; Strauss, one ; Riedel, six ; Krause, one ; Wageninge, one ; Snoep, two ; Potonnier, two ; Viguier, one ; Steinbrenner, one ; Scanzoni, one ; Blatchford, one ; Noeggerath, three). With regard to the time from the first injection and the termination of labor, the shortest period was noticed by Potonnier, viz., three hours ; the longest occurring in one of Steitz cases, viz., eight days ; two days being the average time. The only instance where this method failed, was recorded by Scanzoni (Langenheinrich). This case is published in "*Scanzoni's Beiträgen zur Geburtskunde*," Vol. II. ; Würzburg, 1855 ; Article IV., Mittheilungen von der geburtshilflichen Klinik in Würzburg, von Dr. Langenheinrich ; page 50. But from a careful perusal of this case, it appears that the method was not subjected to a fair trial, the catheter being introduced into the womb two inches, where its further progress was arrested by an unknown obstacle. The water was rejected instantly, as might have been expected, from the fact, that the catheter was not introduced high enough. All authors agree that a considerable portion of the water has to be retained within the womb, to make sure of efficient labor pains. The same thing happened in the second of our cases reported, and if we had not persisted in finding out a region where the catheter could be safely introduced as far as four or five inches, we should certainly have failed. All the mothers recovered, except three, which, however, died from diseases unconnected with the operation, viz., two from eclampsia ; one from puerperal fever. The fate of the child we find noted in fifty-eight cases, thirty-six of which were born alive, and eighteen dead ; the number of deaths corresponding pretty accurately with the number of cross presentations.

Let us now endeavor to compare these results with those of other methods. It would be a waste of time, to discuss anew the value of puncturing the membranes. What accoucheur would not prefer a method by which the membranes remain intact, thus avoiding all the trouble, and all the danger, connected with a dry

labor? And as to ergot? I think no unprejudiced accoucheur will now resort to this remedy, with a view of inducing premature confinement, partly on account of the uncertainty of its operation (one failure in every fifth case, Krause), and partly on account of its generally admitted poisonous influence upon the foetus. This remedy has had its day, and it ought now to be mentioned only from a historical point of view. The dilatation of the os uteri, by compressed sponge (Kluge's method) has met with invincible obstacles in many cases. In some instances, a sufficient dilatation of the os uteri was effected, but no pains followed; cases of this kind have been reported by Houbeau, Jæschke, Jacoby, and Barnes, and altogether about eighteen cases are reported where other means had to be employed, as the action of the sponge proved to be insufficient. Moreover, the application of compressed sponge is tedious both to the patient and the accoucheur. The same may be said of Busch's instrumental dilatation, and the method of Hamilton and of Riecke. The plugging of the vagina with scraped linen (Schöller), or with an animal bladder (Hüter), or with the colpeurynter (Braun) are, doubtless, more safe than the methods just mentioned, but altogether not free from inconveniences. The best of these contrivances is Dr. Braun's caoutchouc bladder-plug. Still, some cases are reported where it was unable to produce pains. Its chief drawback is the irritation of the vagina, and lower section of the uterus, in consequence of its application. Thus Professor Breit, of Tübingen, has published the case of a woman who died from inflammation of the internal genital organs effected by the colpeurynter. But for controlling hæmorrhage, and promoting labor in cases of placenta prævia, the bladder-plug will always remain the remedy par excellence. Scanzoni's methods of inducing premature confinement by irritation of the nipples, or by irritation of the vagina and uterus, with carbonic acid, have met already with a number of failures counterbalancing entirely the amount of success obtained by them. The methods of Drs. Simpson, Merrem, Lehmann, Krause, which are intended to effect labor, by the introduction of a sound, or a catheter with immediate removal, or with a view of leaving the instrument in the uterus, seem to be simple and effectual remedies for this purpose. But very few cases are reported in which they failed. Dr. Braun's latest proposition (see our report), seems to be invented

for the sake only of making a new invention. He proposes to introduce a gut-string between the membranes and the inner surface of the uterus, the effect of which proceeding is certainly no other than that obtained by Krause's method. The use of Galvanism (Radford, Simpson, Mikschik) is often very painful, not certain in its results, and tedious for the accoucheur, even should he happen to be in possession of an electro-galvanic apparatus.

Before entering upon a discussion of the position which ought to be assigned to the douche, we will briefly mention a case in which this remedy was used without making the least impression upon the pregnant uterus. The woman to whom we refer was received into the lying-in hospital of Bonn, *enciente* with her first child, and at about seven months. She was of small rhachitic stature, and, although her spinal column was pretty straight, she measured not more than about four feet ten inches. Her pelvis was, therefore, not spacious and a pretty fair specimen of pelvis *justo minor*, with an antero-posterior diameter of three and three-quarter inches. Under these circumstances, it was thought advisable not to let her go the full term, and the douche was selected for exciting labor pains in the thirty-sixth or thirty-seventh week of pregnancy. We had a large douche ascendante, which threw a powerful stream of water from a height of twelve feet. The basin on the top of it was filled with hot water (100° F.), and I directed the nozzle of the tube as near as possible towards the os tinæ. In this way the water was allowed to play against the lower segment of the womb twice a day for fifteen minutes, and this application continued for a full month. This douche was applied at least fifty-six times, but in vain; not the slightest impression could be made upon the uterus, and not the least indication of uterine contraction could be obtained from beginning to end. She, therefore, was left alone till her full time, and as she had an exceedingly small child, and very strong pains, she was delivered even without the aid of the forceps.

But this is not the only instance of this kind. Dr. Krause, in his elaborate treatise on induction of premature labor, notices thirteen cases in which the douche was insufficient to effect labor (Scanzoni, three; Kowalsky, two; Michaelis, Grenser, Ziehl, Kilian, Ritgen, Goudoever, Dubois, Levy, each one), and not a few cases are mentioned where thirty to seventy applications were required to induce efficient pains (Diesterweg, Germann, Grenser,



Arneth). We are in possession of accounts of about ninety-four cases in which the douche was used (Kiwisch, seven ; Chiari, Grenser, each six ; Harting, Diesterweg, Levy, each four ; Arneth, Busch, Kilian, Germann, Birnbaum, Scanzoni, Simon Thomas, Dubois, Kowalsky, Elliot, each three ; Klein, Stengelmaier, Trogher, Lanz, Braun, Smith, Simpson, each two ; Betschler, Mikschik, Ziehl, Michaelis, Ritgen, Rendlen, Ludwig, Lacy, Skelton, Atthil, Sinclair, Goudoever, Aubinais, Bourgeois, A. K. Gardner, Noeggerath, each one). Of this number, fourteen mothers sickened during the application of the douche—*i. e.*, one was taken with nausea, two with vomiting, three with hæmorrhage, one with violent diarrhœa, two with vaginitis, two with metritis, three with fever ; out of these ninety-three women, in whom the douche was applied, twelve died in childbed. This is a number unparalleled in the history of induction of premature labor. From eighty cases in which ergot was used, only three women died ; from one hundred and thirty-five cases of induction of labor by tapping, eleven died ; from ninety-six cases of intra-uterine injection, three died—*viz.*, two from eclampsia, one from puerperal fever. Out of these eleven cases of death after application of the douche, six were owing to metritis. We are inclined to believe that some, if not all, of these metritides were caused by the douche itself. It is right to suppose that the congestion produced and constantly repeated by the act of throwing a full stream of warm water, as often as thirty or seventy times, in an interval of a few weeks, against the uterus, will at last become stationary, and pass through the different stages of an inflammatory process. It further appears from a perusal of the facts stated above, that the douche cannot be relied upon when applied for the purpose of inducing premature labor ; it proved insufficient in about every sixth case, and had to be exchanged for another method. The uncertainty of action combined with the unfavorable results to the life of the mother are objections which cannot be denied. With regard to the fate of the children, it must be remarked that a considerable number of them were born in a cross presentation, altogether a larger per centage than with the other methods, a fact easily explained by the influence of a concussion (with an upward tendency) of the lower uterine segment and its contents. But as it is well known that almost all children who are artificially delivered before the end of the seventh month are still-born, it will be read-

ily understood, that everything that has a tendency to produce malpositions does actually increase the per centage of still-births. These considerations are modified when we examine the history of those cases, in which the stream of water, thrown from the douche, was directed so as to enter the os uteri. The manœuvre just mentioned has been recommended or executed by Kiwisch himself, by Arneth of Vienna, by Simon Thomas, by Trogher, by G. T. Elliot, A. K. Gardner, and many others. A glance at the results of the operation performed in this manner reveals a remarkable difference in the effects of the douche when applied in the usual manner. In most instances the result was striking, pains arising soon after the first application, while a few cases are recorded where death followed upon its administration. One instance of this kind is reported by Chiari, in which during the application of the douche, the patient was taken with convulsions, cyanosis dyspnœa and died soon afterwards. A similar case is reported by Dr. Germann (see *Monatschrift für Geburtsh.* xii., p. 193), who, after thirty-seven unsuccessful applications of the douche in the usual manner, introduced the mouthpiece of the chlysopompe into the os uteri one inch, and threw about one or one and a half ounces of cold water into the cavity of the womb. The patient perceived immediately afterwards a kind of tension and expansion of her abdomen. A few hours later, she had a most violent chill, and at once a series of the most forcible labor pains, of such a character that Dr. G. became alarmed for the patient's safety. The child was born, and twenty-four hours later the woman was a corpse.

It appears that the application of the douche, with the nozzle inserted into the mouth of the uterus, is a proceeding in many respects similar to that above described as Cohen's method, only less certain in its results, and, as it seems, more dangerous. We think that every reader of this article will conclude with us that the douche, used in the way first recommended by Kiwisch—i. e., without introduction of the mouthpiece into the cavity of the neck, is a procedure, in the generality of cases, too slow, too uncertain, and, as it seems, too dangerous for both mother and child, to be relied upon, and it is now quite common to direct the stream of the douche into the uterus. But if labor is promptly induced in this way, this is mainly due to the water which entered by chance into the uterine cavity. It is really only by chance that the water passes between the uterine walls and the

membranes, unless driven in by strong force ; a proceeding too dangerous, as we have shown above, to be recommended. But if it is our intention to throw a certain quantity of water into the uterus, why not choose a method which is better adapted to the purpose, far more prompt in its effect, more safe to mother and child, easier for the operator, and less troublesome to the patient ? We, therefore, propose to abandon the douche entirely, except in certain cases hereafter to be named, and substitute for it the injection of warm water into the cavity of the womb, by means of a catheter and a common syringe. I am sure that every one who has once tested Dr. Cohen's method, will be struck with the gentleness and promptness of its action, and the simplicity of its execution. In most instances, only one or two injections were required, and the average duration of labor from the time of the first injection was two days ; not one instance is known of its failure, while the prompt recovery of the mothers in childbed, with the exception of those few cases where death resulted from eclampsia, gives us the best guarantee of the harmlessness of this procedure. Moreover, the apparatus required consists of such simple means, that every country-practitioner, residing in the smallest village, is in possession of them ; they consist of an elastic catheter, a common enema-syringe, and a few ounces of warm water. The performance of this simple operation requires only a sufficient knowledge of the female sexual organs in the state of gestation, its execution is fully detailed in the history of the cases at the head of this article, and the only precaution to be taken is, to inject the water not with violence and force, but gently and slowly. But we meet, from time to time, with such a disposition of the internal sexual organs, that the introduction of a catheter is absolutely impossible, whether from a firm closure of the os, or from a location of the vaginal portion, so that it is out of our reach, in an upward or backward direction. Under such circumstances, we have to resort to a preparatory treatment in order to change the condition of the lower uterine segment, a treatment which in many cases may prove sufficient to induce efficient labor pains.

Of all means which may be chosen for this purpose, the douche is no doubt best adapted to our purpose. In acting principally upon the lower circumference of the womb, it is apt to soften the parts, to open somewhat the os, and to bring the vaginal portion more in the direction of the pelvic axis. We will further remark

that Cohen's method ought not to be resorted to when induction of labor is required in case of uterine hæmorrhage, from whatever cause it may arise. In such cases, nothing can surpass the caoutchouc bladder-plug (Braun's colpeurynter), which, introduced empty and filled with ice water, at once controls the bleeding by the double action of cold and pressure, and is almost sure to induce efficient labor-pains by its mere presence in the vagina.

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## ARTICLE II.

*Four Cases of Injection of a Caustic Solution into the Cavity of the Womb, illustrative of the Advantages and Dangers connected with this Proceeding.* By E. NOEGGERATH, M.D.

**Case 1.**—*Intractable Hæmorrhage; Injection of Iodine; Cure.*—Mrs B——, of New York, a well formed woman, of dark complexion, somewhat emaciated and pale, has been suffering from uterine hæmorrhage for the last twelve months. She was married six years ago, and had one child, a boy five years old. Two years ago, her husband died, and left her in charge of an establishment for prostitutes. She became pregnant, and not wishing to bear her child to the full term, she applied to an irregular physician of Brooklyn, with a view of having an abortion performed. This was effected, by means of introducing a pointed instrument into her womb, and a few days after the operation, the contents of the uterus were discharged. From this time, she flowed freely for about two weeks, when the hæmorrhage ceased gradually for about ten or twelve days. It returned regularly every fourth week, and lasted for about a fortnight. The blood she lost was dark and clotted, and its discharge was increased when the patient moved about. Latterly, the hæmorrhage was so violent, that she applied for medical attendance, and notwithstanding she had tried several skillful physicians, one after another, not the least impression was made upon the quantity of blood lost. Finally, I was called in (June, 1858), and found her suffering very much from repeated loss of blood, and unable to attend to her business. First, I applied such internal remedies as I thought proper under the circumstances, recommending at once absolute rest in the recumbent position. Alum, tannin, ergot, iron, oxyde of silver, were administered in large doses, and

although every one of these remedies was allowed to have a fair trial, the hæmorrhage was only arrested for a short time. External applications were added, cold fomentations, astringent injections, but with no better result. In this way, I attended her for about three months, without making any actual progress towards a radical cure. All that could be ascertained by an examination of the parts, was a slight hypertrophy of the whole organ, and the very easy passage of the uterine probe, as high as the fundus. The latter circumstance, combined with the complete absence of pain, served to induce me to try an intra-uterine injection. With regard to the cause of the bleeding, I was of opinion that there existed small polypoid growths in the cavity of the womb, as remnants from an incompletely detached serotina at the time of abortion, or a hypertrophical swelling of the mucous membrane in general, owing to imperfect involution after the act of violence alluded to. In both instances, an intra-uterine injection was not only justified, but demanded. An intra-uterine syringe, with long pipe, made of hard-rubber, and of about 3ss capacity, was filled with tinctura jodi, and the slender mouthpiece introduced through a speculum into the cavity of the womb, until it touched the fundus uteri. By slowly advancing the piston, I emptied the contents into the uterus, which were immediately expelled beneath the syringe, and thrown back into the speculum by violent contractions of the womb. This first injection was made at the time when the last hæmorrhage had nearly subsided, so that I had before me about twelve days till the next menstrual period. Besides a sensation of fullness about the bowels, nothing was perceived by the patient during or after the injection. She immediately afterwards got up and walked about the house. The reaction being so very trifling, I asked the patient to call at my office every other day, to have the injection repeated. This was regularly done, and after every injection, the patient rode and walked down from Twenty-sixth Street to Centre, near Broome Street, without experiencing the least inconvenience. The iodine was thus employed four times before the next menses made their appearance, and when they came on, a complete change in their character could be remarked. The blood was fluid instead of clotted, considerably brighter colored than before, and lasting for five days, not more copious than is usual in a woman menstruating normally. When the period was over, I repeated the injections

twice a week, in order to consolidate the results already obtained. The next period was all that could be desired, and I discharged her as cured. She afterwards left for the country, but from occasional reports of her condition, I am aware that she has had no recurrence of hæmorrhage.

**Case 2.**—*Uterine hæmorrhage, of twenty-three years' standing, cured by a single injection of diluted liquor ferri sesquichlorati.—Alarming symptoms after the Injection; Slow Recovery.*—Mrs. G——d, of East Seventeenth Street, forty-five years of age, of German parentage, menstruated early in life, and her courses continued regular up to the year 1835, when she was married, and nine months later, delivered of a healthy child. The confinement was as natural as could be desired, so that she was about the house before nine days had elapsed. Although she did not nurse her baby, her courses did not appear until twelve months after delivery, brought on, as it seems, by the use of emmenagogic remedies, and then lasted for half a year without intermission. Medical advice was sought, and everything was tried to bring on a more natural periodical discharge. But treatment seemed to have very little influence, the flux ceasing only ten or twelve days, to return with unchecked violence. This condition lasted for sixteen or eighteen years, when the menorrhagic attacks began to increase. For the last five or six years, she had very often only a few days of intermission, and this space was filled by an even more troublesome acrid watery discharge. At the beginning of 1857, new complaints were added, viz., a burning pain in the ovarian region, and a sharp pain at the time when she had sexual intercourse, which act was always followed by a discharge of blood from the genitals. She therefore dragged out a most miserable existence, being all the time wet with blood or other discharges; constantly in pain, weak, nervous, and emaciated, without the hope of relief, and altogether a burden to herself and family. Under these circumstances, I was called upon to see her, and give my advice. I found a person whose aspect was pitiful to witness, of an ashy complexion, a mere skeleton, scarcely able to move, and even fatigued by a short conversation, but resolved to submit to anything that might effect a change in her condition, be it at the risk of her life. When I saw her, I was moved with a strong desire to give her all the relief that might be afforded by medical science and art, but my hopes with regard to a radical

cure were very faint, not so much from the reduced state of the patient's health, as from the fact that she had been for the last few years attended, without deriving much benefit, by Dr. S., a physician for whose ability and learning I entertain the highest admiration. A digital examination being necessary, was readily consented to. The vaginal portion of the uterus rested somewhat lower than it ought to be under normal circumstances, was considerably thicker, but soft, the os tinæ patulous, and covered with small granulations. By the double touch, the entire organ appeared to be enlarged, and of a more spherical form than usual, painful even upon gentle pressure; left ovary considerably enlarged, and very painful. By examining through the rectum, a pretty large section of the posterior surface of the womb could be circumscribed, and in this way it was ascertained that a hard, flat tumor, of considerable size, was imbedded in the uterine tissue. The probe passed easily into the cavity, and could be advanced three inches and a half, thus giving a hypertrophy of one inch in length. The results thus obtained, together with the patient's account of her ailings, induced me to assume that I had to deal with a fibrous growth in the uterine tissue, or a simple uterine polypus, protruding into its cavity. In order to make sure of the diagnosis, and as a preparatory step for treatment, I proceeded to enlarge the uterine cavity, by means of compressed sponge tents.

First, a sponge of small circumference, one inch and a half long, was introduced, and left there for about eight hours; a time sufficient for its perfect softening and expansion. Immediately after its removal, a second sponge was introduced sufficiently long, nearly to touch the fundus uteri, and left there over night. I was now enabled to pass my forefinger almost its entire length into the cavity of the womb, so that I was enabled to examine its entire inner surface. No polypus could be detected, the mucous membrane seemed to be not perfectly smooth, perhaps, owing to the influence of the irregular surface of the sponge, which stuck very fast to it in every direction, when it was withdrawn. While thus examining the womb, there was a feeling as if the posterior wall protruded to a great extent, and as if a large hard body was situated behind the thickened lining membrane. This examination excluded the diagnosis of polypus uteri, verifying that of interstitial fibroid tumor. I now proceeded to introduce a glass-speculum into the vagina, and through it a syringe, which

contained the liquor ferri sesquichlorati mixed with equal parts of water, making altogether about half an ounce. The mouthpiece being advanced up to the fundus uteri, its contents were emptied into the womb, and almost instantly rejected into the vagina. I took care not to remove the speculum as long as a drop of the solution came away from the os uteri. The first symptom was a burning sensation in the vagina, which was owing to a portion of the injected fluid, which came in contact with the vagina, when the speculum was withdrawn. The injection was made at eleven o'clock, A. M., April 30, 1858. When I saw the patient in the evening, she seemed to be much prostrated, always complaining of the soreness above mentioned, and a dull pain in the lower part of the stomach, which corresponded with the uterus. I ordered cooling injections into the vagina, and a few doses of acetate of morphium. On the following day, her condition was not much changed; the sore spot less noticed; pains in the stomach increased; sensation of nausea; continued morphium. Third day; so low that she was scarcely able to move or speak; pain in the uterine region increased by the slightest touch; abdomen slightly swollen; ordered stimulant drinks, opium with camphor. In the evening about the same; complained of headache and giddiness; pulse about 130; very feeble; abdominal pains not remarkably increased. Fourth day: very much prostrated; her family thinks she cannot live much longer; pulse scarcely perceptible; skin cold; constant nausea; no change in local symptoms; ordered brandy and quinine. Sixth day: feels a little stronger; pulse somewhat stronger; treatment continued. Seventh day: slowly improving; remarked a few drops of a watery discharge from the vagina. With returning irritability, the pain around the uterus is more acutely perceived, and I therefore had a blister applied above the pubic region, as soon as I considered her strong enough to bear all the pain and trouble connected with the dressing a blister. Recovery proceeded very slowly, and not without one or two alarming relapses, which threatened to carry her off. The discharge above mentioned, continued for eight weeks, when she had, for the first time, a small flux of blood which lasted for five days. It was not before ten weeks from the day the injection was made, that she was strong enough to leave her bed, and then, only for a few hours at a time. One month after the first show, she had another dis-



charge of blood which continued six days, but did not make an unfavorable impression upon the state of her health. At the end of August, 1858, she was able to leave her house to be removed to the country, where she gained strength considerably, and in a comparatively short time. Her menses appeared every fourth week regularly, diminishing in quantity on every succeeding turn, so that from October last, she professed to have her courses as regular, and in that quantity which every healthy woman ought to have.

**Case 3.**—*Injection of a Caustic Solution into the Uterus ; Severe Metro-peritonitis ; Recovery.*—Mrs. K——, of Seventh Avenue, called at my office to be treated for fluor albus, of which she had complained ever since the birth of her last child, which was now about two years old. She had been attended by several physicians, who prescribed internal remedies and astringent injections ; but all to no avail, for as soon as she stopped using the syringe, the white discharge came on in undiminished quantity. Latterly, her courses had become very scanty, her strength began to give away, and she was constantly tormented by a pain in the small of her back. Upon examination, I found the vagina covered with a copious, thick, semi-transparent fluid, the uterus in its normal position, slightly sensible to the touch, very little hypertrophied, mouth somewhat open, its surface not quite smooth, both lips covered with red granulations, and bathed in a muco-purulent secretion from the cavity of the womb. This was no doubt a fair specimen of catarrhus uteri, and a caustic application to the diseased surface seemed to be the very thing that was required, as the only safe means of effecting a permanent cure. I, therefore, introduced the mouth-piece of an India-rubber syringe with long pipe, containing a few drops of a solution of one part of nitrate of silver to four parts of water, into the mouth of the uterus, and emptied the contents of the syringe very slowly into the womb. Most of the fluid returned immediately, and I am sure that the end of the syringe entered not further than one inch into the cervical canal.

When the patient stepped from the lounge she had to sit down quickly upon a chair, because of a transient sensation of fainting. This was at three o'clock, P. M., and at about six o'clock I was called in haste to see her at her residence. I found her very low and uneasy, vomiting incessantly, and complaining of pain in her

head. I learned that a few minutes after leaving my office she began to vomit, and continued to vomit to the time of my visit. There was besides a dull pain both around the left ovarian and the pubic region, which increased on pressure with my hands; still the abdomen was not tense nor swollen; pulse feeble, about one hundred strokes in a minute. I ordered Magendies solution dissolved in potio Riveri, and linseed poultices to be applied to the painful spot. She passed a very uncomfortable night, feeling as if she was always near fainting, and vomiting as soon as she took the least drink. I found her on the following day very low and pale, so much that I felt alarmed about her condition, pulse one hundred and thirty, feeble, pain in the region of the womb increased. Ordered a large blister and powerful doses of opium with camphor, small pieces of ice to be taken when she felt thirsty. Towards evening she was under the influence of the drug and felt somewhat easier. On the third day, the vomiting had almost entirely ceased, but she did not dare to lift up her head, fearful of increasing the sensation of giddiness which she had experienced from the very first day of her sickness. The pain in the lower part of the stomach not increased, pulse falling. All the while not the least show of a secretion from the vagina was remarked. On the following days her condition was even more satisfactory, especially on the sixth day, when a flux of clear, bright blood had suddenly made its appearance. The blister was now permitted to dry up, and the patient was able to leave her bed on the tenth day from the time of the caustic application. After this she could not be induced to continue a course of local treatment, being impressed with the idea that the first attempt had come very near killing her.

**Case 4.**—*Application of a Solution of Nitrate of Silver to the inner surface of the Womb; Death on the sixth day.*—Mrs. U——, of Sixth Avenue, a slender woman of light complexion and an irritable disposition. When I saw her first (September 1856), I was called to attend her for the “whites” and “pains in the small of her back.” Of her history I learned briefly that she was married about seven years ago to a man, who not only neglected her, but whom she suspected of having intercourse with prostitutes, from the fact of his having contracted a venereal disease, for which she could not account in any other way. Upon being questioned, she admitted that her disease might have been communicated to

her by her husband. Although she was not able to trace the exact time when she began to suffer ; she had been ill for one and a half or two years. The discharge of which she complained was at first very little and thick, becoming more profuse, watery, and somewhat offensive of late. This circumstance, connected with her growing daily thinner and weaker, induced her to seek medical advice, and she readily submitted to a thorough examination. The vulva and vagina were bathed in a scrous, greenish, offensive fluid, and consequently were red and irritated. Upon examining the uterus with the finger, it was found that about two-thirds of the vaginal portion were gone, and what little remained, the seat of an irregular ulceration which extended far into the cavity of the neck. This part was laid open to view by means of a speculum. The surface thus exposed was of a dirty, grayish color, with irregular, sharp cut protuberances, limited by a jagged margin which, towards the right side, embraced part of the laquear vaginæ. A small particle was taken away from this diseased spot for microscopical examination. It was afterwards found to consist of nothing but the natural elements of the cervical portion, areolar tissue, and fibres of organic muscles, all of which were in a state of desintegration, representing a granulated appearance, as if interspersed with molecular (fatty) corpuscula.

Diagnosis: *ulcus corrodens portionis vaginalis e causa syphilitica.*

*Treatment.*—We are of opinion that most, if not all, the corrosive ulcers of the vaginal portions are chancres in a phagedænic state ; we further believe, that the phagedænic chancre is a variety of the soft chancre, thus demanding no general anti-syphilitic but chiefly a local treatment. In this instance, at least, there could be no doubt about the nature of the disease, and never had any secondary symptoms occurred. On September 15th, the actual cautery was applied. An olive-shaped iron was heated white and brought in contact with the entire surface as far as it was diseased, and even passed into the cavity of the neck for a considerable distance. The pain experienced during the operation was trifling, and the patient rose from the table, where she was placed, and walked to her bed as if nothing had happened. The reaction which followed was insignificant, the pulse rising not above ninety strokes in the minute ; the discharge diminished in quantity and quality, being less offensive and of a better color. The

patient was ordered to take a strong decoction of bark and rich food, under which treatment she seemed to recover some strength. Ten days after the cauterization she was examined again, and the affected portion seemed to be in a fair way towards healing ; instead of the ragged, pale surface, I found a fresh looking wound, partly covered with red granulations. Still some small spots were left, exhibiting traces of the old disease. I, therefore, thought it necessary to continue cauterization, though on a less active plan. Nitrate of silver seemed to be all that could be desired, and I dissolved a drachm in an ounce of water to be used for local application. The patient, therefore, was again placed on the table, the speculum again introduced, and a small camel-hair brush soaked in the solution just mentioned was applied to the ulceration. The place which had the most unhealthy aspect was that situated in the centre of the os tincæ, and thinking that the corrosion might have spread far into the neck, I introduced the brush into the cervical canal as far as I thought proper, but certainly not more than one inch or one and a half. When the patient was brought to bed, she remarked that the pain from this application was as great, if not worse, than that of the first one. Still she did not seem to have any alarming symptoms about her. When I saw her on the following day, there was a change in her expression ; her features were not as lively as before ; she felt very weak and complained of a pain in the lower part of her stomach. This pain she had felt coming on gradually ever since the operation, and upon closer examination it could be ascertained that its seat was in the womb itself ; the discharge had entirely ceased, her skin was hot but moist, pulse about one hundred and ten in a minute. I was at a loss to determine the cause of these symptoms, considering it singular that the milder caustic should produce more serious symptoms than the stronger one. I ordered her to take the extract of hyosciamus in an emulsion of castor-oil, and warm poultices to be applied to her stomach. The two days following, she was much the same, and, therefore, she continued the hyosciamus and the poultices. On the fourth day she was rather worse ; abdomen very painful and somewhat swollen ; small doses of opium administered. On the night following, she was very restless, speaking as if in delirium, constantly grasping her stomach. On the fifth day, I found her fully prostrated, with a clammy sweat, a small, fluttering pulse, and only half conscious. I gave

up all hopes of recovery, but ordered large doses of musk, which seemed to revive her, but only for a short time. Towards night she sank rapidly, and died about three o'clock, A. M., of the following day. No post mortem examination allowed. Although no autopsy was made in this case, it is clear that the woman died from metro-peritonitis, induced by application of a caustic solution to the inner surface of the womb. After the first application of the heated iron she was in a fair way of recovery, as well with regard to the consideration of the local disease, as to that of her general system, she had began to walk around the house, and had altogether a brighter look than before. But as soon as the nitrate of silver was used, she was suddenly and unexpectedly taken ill, with symptoms of metro-peritonitis, from which she ultimately died. Although at first I was not inclined to attribute the sudden change in the health of the patient to the caustic, I was at last forced to consider this application as the only cause of the inflammation of the womb and appendages, and I believe that every unprejudiced reader will agree in this explanation of the facts.

From a perusal of the cases reported above, it appears that in one of them no reäction whatever followed upon the injection of the caustic agent ; two exhibited very alarming symptoms, and one resulted in death. The question whether caustic injections into womb are connected with dangers or not, seems to be as yet unsettled. While some authors reject their use entirely, others seem to think light of it, and most of them consider it a safe proceeding, provided the uterine cavity had been previously enlarged artificially. Thus Dr. West, in his recent work on the *Diseases of Women*, remarks : "I say nothing about the use of intra-uterine injections in cases of long-standing leucorrhœa, for I have no personal experience of their employment, and besides the risk of the proceeding has led to their almost universal abandonment." Dr. Kiwisch (*Klinische Vorträge, etc.*), says the impression following upon caustic intra-uterine injections is only momentary and unconnected with disastrous symptoms, if the fluid injected can easily flow back from the cavity. Dr. Scanzoni, when speaking of intra-uterine injections (*Lehrbuch der Krankheiten der weiblichen Sexualorgane*), remarks that he had never remarked any disagreeable consequences from caustic injections in those cases where the cavity of the womb and the os uteri were large enough to allow a free escape of the injected fluid. But from our second case, it

appears that, although the cavity of the womb had been enlarged throughout so as to admit the forefinger to pass inside the womb up to the fundus, the reaction was such that the patient's life was endangered. The fluid injected in this instance was discharged instantly beneath the syringe to its full amount; very little pain was perceived after the injection, and no violent symptoms followed after the operation. We must, therefore, exclude the possibility that a part of the fluid had entered the abdominal cavity, an accident often quoted as the cause of danger connected with intra-uterine injections. We are of opinion that the entrance of a caustic solution into the peritoneal cavity would give rise to instant acute pain on one well-marked spot, and to a rapid development of abdominal meteorism. Nothing of this kind occurred in any of our cases, and we are inclined to believe that this event is prevented in all cases of caustic injections by the contraction of the tubal sphincters excited by the irritating fluid itself.

We have often had occasion to observe that an irritating injection into the womb is instantly followed by a spasmodic contraction of its muscular apparatus, driving the fluid out of the os uteri with considerable force. This peristaltic motion is no doubt communicated to the muscular layer of the tubes, and as the tendency of their action is physiologically directed towards the cavity of the womb, it is but natural to suppose that every particle of fluid which by chance might have been thrown into the fallopian tubes will be immediately rejected into the uterus by the peristaltic motion proper to them. But even if this theoretical reasoning should leave the least doubt with regard to the non-propagation of the fluid through the tubes, we will refer to the fourth case, the one which resulted in death. In this instance, the caustic solution was brought in contact with the uterine cavity by means of a small brush, and was not injected. The quantity of liquid thus applied could not be more than one large drop, and the remotest point touched by the brush was about one inch and a half distant from the os tincæ. But we have often remarked, that a strong solution of nitrate of silver is apt to spread considerably in the neighborhood of the spot touched with the brush. This accident must have happened in the case just mentioned; the fluid proceeded, we suppose, from the cavity of the neck into that of the womb, through the sphincter internus, which, paralyzed as it was by a uterine disease of long standing, offered not the least

resistance to its progress, and by following the laws of gravitation it slowly advanced into the uterus, which was slightly retroverted. Also in the third case only a few drops were slowly injected into the cavity of the neck, and still this was enough to kindle a metritis, accompanied by such a fearful depression of the system, that recovery seemed doubtful.

The conclusions drawn from these considerations seem to show that the dangers connected with intra-uterine injections are not so much derived from a passage of the fluid into the abdominal cavity, as from the direct influence of the caustic agent upon the uterus itself. In those cases where the milder caustics are applied, or where the organ has only a limited degree of susceptibility, the injection is followed by a more or less severe endometritis, which generally terminates by resolution. But under circumstances similar to those mentioned in the history of the cases reported, the inflammation seems to proceed to the deeper layers, the areolar, muscular tissue, and lastly to the peritoneal membrane lining the body of the uterus, thus terminating in the most disastrous form of metro-peritonitis.

From this it would appear that we ought to abstain entirely from the use of caustic injections into the cavity of the womb. For if it is true that they are at times followed by dangerous and even fatal consequences, they must be considered as means inadequate to the evils which they are intended to relieve. I mean to say that a complaint which is not endangering in a direct way the sufferer's life, ought not to be attacked with a remedy that might possibly remove the disease and the patient at once. To this class of morbid alterations belong hypertrophy, ulceration, abnormal secretion, and fungoid excrescences of the uterine mucous membrane, conditions which have been often treated with caustic solutions. From this consideration, the treatment of violent hæmorrhages is naturally excluded; with regard to them, we must act after the principle : *aux grands maux les grands remèdes*.

In coming to this conclusion, I am far from advising against the use of caustics in general. All I want to impress upon my readers is the necessity of being cautious in their application, more cautious I mean than some of our obstetric specialists. There seems to exist a certain climax in the different remedies themselves, some of them, although very effectual, are comparatively innocuous, while others are almost always followed by violent

reaction. Among the former we count the tincture of iodine, and some of the organic acids, such as tannin and benzoë, among the latter, the solutions of silver and mercury as well as the stronger mineral acids. The remedy which most happily combines a high degree of innocuity and of efficiency is the tincture of iodine. I have had frequent occasions to inject it into the cavity of the womb, and as yet I have never remarked the least untoward symptom from its application. The use of a strong solution of nitrate of silver is almost always followed by a destruction of part or the whole of the mucous membrane, an incident which no doubt is at times required and intended for effectual treatment, and really in many instances this is perfected without any injury to the patient's health. It, indeed, seems that a solution which in one instance is very well born, does produce the most alarming symptoms in another person. In this the uterus resembles the urethra of the male, which at times can bear manipulation with impunity, while again a single cautious application of the catheter may prove fatal. We should, therefore, ascertain the irritability of the womb before we attempt to apply one of the stronger caustics to its inner surface. This can be readily done by throwing a quantity of common water into the uterus, this test to be followed by a series of weaker and stronger irritating injections. A few trials of this kind will soon enable us to learn to what degree we are allowed to saturate the solution. Another advantage of these graduated injections is the fact of their diminishing the uterine irritability, thus preparing the womb for the reception of stronger solutions, in case they should be demanded.

### ARTICLE III.

*Remarks on the Employment of Pessaries ; with the description of a New Instrument.\** By E. NOEGGERATH, M.D.

The more intractable a disease has proved to the treatment, the greater is the number of so-called infallible remedies proposed for it. This is true of prolapsus uteri. Every year, almost from the days of Hippocrates, has enriched the number of uterine instru-

\* This article is reprinted with additions from the *New York Journal of Medicine* for November, 1858.



ments for the cure of falling of the womb, and still the mystery seems to be undissolved. This is partially owing to the fact, that till now, no instrument has been constructed that satisfies practitioners in general, partially to the inventing-mania of some of our professional brethren.

There are two classes of physicians, one of which being disgusted with the host of mechanical appliances, now lauded, now rejected, has almost entirely abandoned the application of pessaries; while the other treats the slightest deviation with a mechanical support. Though the latter do more than the former, neither of them proceed upon the correct principle.

As to the comparative value of the operation for prolapsus, the question is not yet settled. When we attempt a final solution of the question, whether the average number of subjects operated upon are permanently benefited by it or not, we are overwhelmed daily with the most contradictory reports of its value. Moreover, the greatest number of practitioners are called upon to treat cases, not in the hospital, but private patients, who claim a right to dispose of themselves just as they choose. And most of them are alarmed at the very sight of a bistoury.

And still there are physicians, some of the highest standing, who try to avoid the use of a pessary by treating cases of prolapsus, on the so-called radical plan, i. e., by removing the original disease, chronic metritis, hypertrophy of the womb, etc., applying afterwards astringent injections and suppositories, while the patients are laid up for two or six months, to be discharged with an abdominal supporter! The great objection to this plan is the fact, that it is crowned with success only in an exceedingly small number of cases, while its employment is perfectly out of the question in the large majority of cases, because that class of society among which prolapsus is commonly found, has neither time nor means to resort to it. It is the working portion of the sex which suffer with this complaint, and they want a prompt and cheap remedy.

In regard to abdominal supporters (Annan, Hull, Hamilton, Giehrl) I consider them as excellent adjuvants in the treatment of prolapsus, but the relief derived from them is far less than that offered by a well-adapted pessary.

The only operation which is always followed by great relief, is the amputation of the cervix, in cases where the prolapsus is

owing to hypertrophy of the lower section of the womb. Dr. C. MAYER, of Berlin, the well-known obstetrician, has resorted to it with the fullest satisfaction in a great number of cases.

In recommending the use of pessaries in the treatment of prolapsus uteri, I am far from resorting to it in every-day practice, viz., that of diagnosing prolapsus uteri, and prescribing a pessary at once. Nay, there are cases which do not justify instrumental treatment at all, while almost every single case demands a preparatory treatment before a pessary can be applied. The necessity of a careful examination, and a full consideration of the complication present cannot be urged too strongly. The neglect of this principle is the common source of failure in the treatment of prolapsus. For the same reason, no physician should prescribe a pessary on the sole assertion of the patient herself, that she suffers from falling of the womb. I have frequently met with patients, who believed themselves to be subject to this complaint, who, upon examination, were found to have metritis or malpositions and flexions of the womb. It is obvious, that a pessary in this class of cases, would be injurious instead of beneficial.

The patient must be examined as well in an erect as in a horizontal position, as it often happens, that a prolapsus disappears entirely when the patient is lying on her back. After the presence of prolapsus has been ascertained in this way, the patient must be subjected to a thorough examination, while in a horizontal position. It is best to begin with the palpation of the abdomen, in order to get a knowledge of abnormalities in the supra-pelvic and pelvic cavities. Hereafter the prolapsed portions themselves must be inspected, and the state of the anterior and posterior wall, and that of the womb itself, have to be taken into consideration.

Moreover, the color and condition of the respective mucous membranes have to be taken into consideration, as well as the presence of ulcerations, their different character, their seat in the cervical canal, near the orifice, or on the walls of the vagina. Hereafter the prolapsed portions have to be touched all around with the fingers, in order to ascertain their condition, and the possibility of full or partial reduction. In order to get a full view of the position of the uterus, it is well to introduce one or two fingers into that portion of the vagina which is inside of the pelvis. By examining through the rectum, we may ascertain how far it is involved in the prolapsus. Hereafter the situation and

size of the womb has to be ascertained with the probe, and that of the bladder with the catheter. After this the parts must be pushed upwards, in order to examine the sexual organs inside of the pelvis and the pelvis itself. In those cases, where the neck of the uterus is not in sight, it has to be explored with the speculum.

The different forms which a prolapsus may represent, are as follows : 1. One of the walls of the vagina may prolapse, without participation of the womb, viz. :

(a) Prolapsus of the anterior wall of the vagina.

(b) Prolapsus of the posterior wall. These cases are generally recorded under the name of cystocele and rectocele vaginalis.

2. Prolapsus of one or both vaginal walls, with partial prolapsus of the womb.

(a) Prolapsus of the anter-wall of the vagina and partial prolapsus of the womb.

(b) Prolapsus of the posterior wall of the vagina and partial prolapsus of the womb.

(c) Prolapsus of both walls of the vagina and partial prolapsus of the womb.

The cases of prolapsus of the anterior wall and the uterus are very often connected with retroversion and flexions of the womb. The body of the womb is generally turned somewhat backwards, pressing upon the os sacrum and rectum. These cases, therefore, are very often complicated with very troublesome constipations of the bowels.

3. Prolapsus of both vaginal walls and complete prolapsus of the womb. This variety is the most commonly met with, because women affected with the disease very often do not apply for medical advice until twenty or even forty years have passed since its first start.

4. Prolapsus of the uterus. This is of very rare occurrence. The inferior portion of the womb, generally hypertrophied in a great measure, protrudes between the labia majora as a thin cone, which sometimes attains the length of three or four inches. As its lower end is rounded off, and perforated by the orifice, it resembles the penis of the male.

In most cases of prolapsus the lining membrane is the seat of superficial or deeper ulceration. The ulcerations coincident with prolapsus must be divided into two different classes, viz., those which are the consequences of an idiopathic uterine disease, and

those which are the result of mechanical irritations. This distinction is important with regard to treatment. The ulcerations from a mechanical cause are limited by irregular, sharp, callous edges, and their base is discolored with a brownish hue, yielding a dirty, thin, often very offensive secretion. The ulcerations from chronic metritis are of a more inflammatory character, inclined to bleeding, spreading rapidly on the slightest occasion, and very obstinate to treatment, unless the metritis has been subdued beforehand.

Other complications very often connected with prolapsus are *retroflexio*, *retroversio*, and *anteflexio*. Every complete prolapsus uteri is followed by *hypertrophy* of the organ, which attains in most cases the longitudinal axis, while at times the womb is considerably increased in thickness. In the first instances, the probe may be advanced into its cavity as far as five or seven inches. In other cases the cervical portion alone or one of the lips only are hypertrophied.

In consequence of the *displacement of the bladder*, always present in cases prolapsus of the anterior wall of the vagina, the urethra is often covered with fungous vegetations, which at times attain the length of half an inch in diameter. *Hernia recti* and *prolapsus ani* are of comparatively rare occurrence, while *rupture of the perineum* is not seldom. These and other complications have to be removed, as far as possible, before the application of a pessary can be thought of. The treatment of some is very tedious, and demands a good deal of patience from the attending physician and the woman herself.

Chronic metritis, hyperæmia and painfulness of the prolapsed parts must be treated with leeches, sacrifices, anodynes, resorbents, etc. The ulcerations have to be cured thoroughly before a permanent retention of the womb can be thought of. It is perfectly contradictory to experience, that the reposition of the parts into the vagina is sufficient for the cure of these ulcerations, an opinion cherished by some of our very first obstetric physicians. The only complication which requires no treatment before the application of a pessary is simple hypertrophy of the womb.

The most efficient remedies for treating these ulcerations are nitrate of silver, acideum pyrolignosum, scarifications, removal with the knife of the callous edges, fomentations with lead-water, slight cathartics.

The *ulcerations of the vaginal walls* are of a very intractable

nature ; they are never benefited by the application of caustics, such as nitrate of silver ; scarifications repeated every third or fourth day, and the applications of acid—pyrolignosum answer much better. They often require twelve or eighteen months' treatment before a sufficiently firm scar has been attained. The ulcerations seated in or near the cervical canal must be healed up (at least as far as they spread over the lips) before a pessary can be introduced, while the treatment of the intra-cervical ulcerations may be continued afterwards with the speculum. It must never be forgotten, that all ulcerations which are touched by the pessary will increase and make the use of an instrument impossible. Only in those exceptional cases, where the ulcerations resist the most rational and persevering treatment, they may be covered with a piece of soft and dry lint, and a pessary introduced afterwards, and treatment continued intra-vaginal. In those cases where bodily rest can be resorted to, it is of great value for the cure of ulcerations ; at any rate, in treating these affections, the greatest cleanliness must be observed, the parts must be thoroughly sponged after going to stool, and they must be covered always with a clean piece of dry linen.

The use of a pessary seems to be connected with the greatest difficulty in those patients where prolapsus is complicated with both hypertrophy and flexion of the womb.

In the very first days of its application violent back-ache, a sensation of bearing-down and prolapsus of one of the vaginal walls make their appearance. When examined, the body of the retroflected uterus is found very painful, and ulcerations appear on different places.

In these cases it is a good plan to elevate the retroflected womb by the uterine sound, thus fixing it towards the promontory. Then a pessary may be introduced and absolute rest recommended for some time. If this is not sufficient, the only means left, is to introduce a soft sponge behind the cervical neck, which, in many cases, does retain the prolapsed womb in its position. The sponge has to be removed, cleansed, and reintroduced daily for some weeks before another application of a pessary may be tried, which at first must be applied in connection with the sponge. By a strict and indefatigable adherence to these rules, a pessary is finally endured without any inconvenience.

After a full consideration and treatment of the different com-

plications, it is of the greatest importance to choose the right kind of instrument.

The requisites of a good instrument are as follows: 1. It must retain the womb in or near its natural position. 2. It must neither irritate the womb nor the vagina. 3. It must not interfere with the patient's moving round, sitting, or excretion of urine and fæces. 4. It must be composed of a substance, which resists the corrosive influence of the secretions from the genitals. 5. It must be constructed so as to be easily introduced, removed and cleaned by the patient herself. 6. It must be as cheap as possible.

The different pessaries may be divided into two sections, viz., those which support the womb directly, and those which support it indirectly, by elevating the vagina. Until late years, only the former class was exclusively applied, as this idea most naturally suggested itself at first sight. They are divided again into *stalked* and *unstalked*. Both are intended to give a direct support to the fallen uterus. Later researches seem to show that the chief and most natural support of the uterus was presented by the vagina, and in this view surgical operations as well as instruments were invented, and, as it seems, successfully applied for the cure of prolapsus.

The first man who clearly followed this indication in constructing his pessary, was Prof. Kilian, in 1846, and he called it *elytromochlion*—i. e., vaginal supporter.

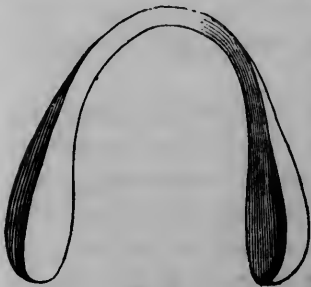


Fig. 1.

His instrument consisted of a thin, steel spring, four inches long, the points of which ended in wooden buttons, and the whole of it was covered with a thin layer of india-rubber. In introducing the instrument, the ends of it are approximated to each other as much as is required for its easy introduction into the vagina.

In applying it, it must be elevated in the direction of the lateral diameter of the vagina, while its convex portion is directed towards the anterior walls of the pelvis. The instrument thus bent is gently pushed upwards, so that its points take a position to the right and left side of the uterine neck, as high up as possible in the laquear vaginæ.

Although the instrument has been abandoned by the profession, owing to the fact that very few women can bear the pressure which it necessarily must exert, in order to sustain itself in the vagina, the elytromochlion of Kilian has been applied in some cases successfully, thus proving that the theory of its construction was based upon sound principles.

In 1853, Dr. Zwank, of Hamburg, published the description of his new *hysterophor*. It consists of two ovoid thin pieces of metal, covered with india-rubber, or of wood, connected on one end by a joint. In the neighborhood of this joint, on the external surface of the wings, is a metallic pin, on each side two inches long, which can be screwed together at the lower end.

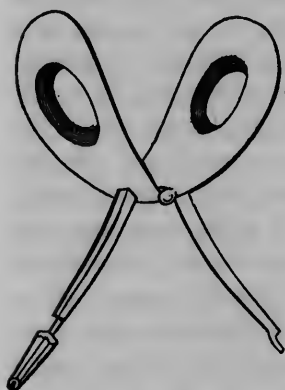


Fig. 2.

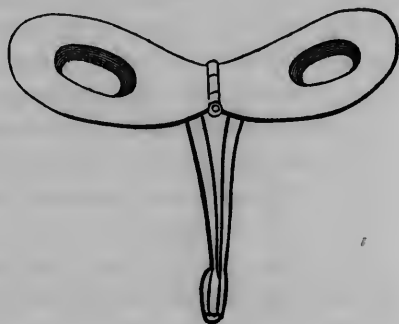


Fig. 3.

In applying the instrument, the wings are approached as much as possible (fig. 2), and introduced so that its convex portion is turned towards the os sacrum, and pushed upwards, as high as possible, towards the anterior portion of the laquear vaginæ, in front of the neck of the uterus. Afterwards the lower ends of the metallic handles are compressed, and fastened by the screw (fig. 3). In this position the instrument is retained by itself.

About the same time, Dr. SCHILLING, of Munich, invented quite a similar instrument to that of Zwank; the only difference being, that the movement of the wings is effected, and can be regulated by the screw at its lower end. The purpose of both instruments is, to gently expand the lateral portions, and sustain the superior wall of the vagina, thus preventing its inversion, and consequently, the falling of the womb.

Dr. ZWANK'S instrument was received enthusiastically by the

profession in Germany. Such men as C. Mayer, Chiari, Braun, Scanzoni, Breslau, etc., thought it of sufficient importance, to publish their observations in favor of this instrument, and at the present time it has actually supplanted all of its kind.

What is the reason of this? Is it because the profession seized upon the instrument, because it was a new invention? Is it because an instrument was wanted? or has it fulfilled what it claimed to do?

The question which we propose to consider, is whether this instrument has any advantage over others hitherto applied for the same purpose. It certainly has; because, 1. It is lighter. 2. It touches only a comparatively small circumference of the vagina, and scarcely any portion of the womb; thus preventing irritation and ulceration of the vagina, incarceration of the uterus, fluor albus, uneasy feelings. 3. It can be easily introduced and removed, easily brought to its proper place, easily cleaned by the patient herself. This is a combination of advantages, sought for in vain among the host of previously-invented pessaries. On the other hand, the hysterophors of Zwank and Schilling have some disadvantages, owing to the substance of which they are composed. The greatest number of them, as now in use, are covered with a coat of vulcanized india-rubber. The discharges of the vagina destroy it in a very short time. After this has been done, the metallic portions begin to rust and decay, thus irritating the vulva; the furrows of the screw at the lower end of the instrument begin to crust, or the screw, if turned too firmly, cannot be untwisted. Some patients have little dexterity, and do not know how to manage the screw at all. An illustration of these facts I am seeing daily, in the case of a lady belonging to the first class of society. She is the widow of a well-known physician of this city, and has suffered from prolapsus uteri ever since her first confinement, many years ago. The most thorough examination is unable to detect anything abnormal about her genital organs, except prolapsus uteri. She has been under the very best treatment of general practitioners and uterine specialists. Everything has been resorted to, to effect a radical cure, and all kinds of pessaries employed, but in vain. At length, one of Zwank's pessaries was suggested. She has worn it now for a year, and is perfectly satisfied; the only drawback being the loss of the india-rubber coating, and the rusting of the metallic skeleton.



In order to avoid these inconveniences, Dr. Eulenburg, of Coblenz, modified Dr. Zwank's pessary, and described his instrument in a short thesis, in 1857. It is made entirely of boxwood, and its wings are a little differently shaped, viz.: they are slightly curved downwards at both ends, so that the lower side forms a concave surface. In consequence of this shape, the lateral branches closely adapt themselves to the inner surface of the ramus descendens ossium pubis; thus presenting a kind of hook, which gives a strong hold to the instrument when in the vagina. Both wings move in the centre part by two joints, thus leaving a hole in the middle, through which the secretions of the vagina are allowed to escape. Instead of the screw, Dr. Eulenburg perfected the opening and shutting of the wings, by means of an elastic india-rubber ring, which runs in a channel around the body of the hysterophor, immediately below the two joints.

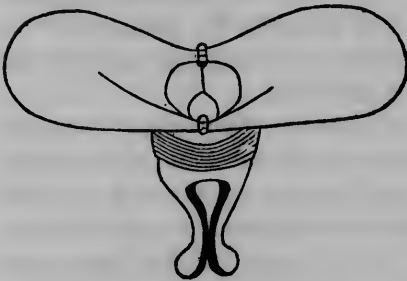


Fig. 4.

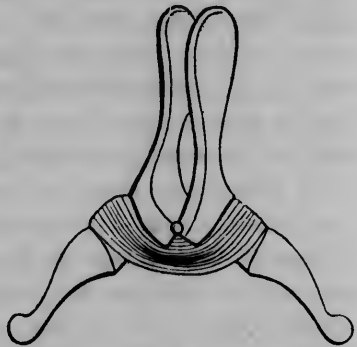


Fig. 5.

By this contrivance, the introduction of the instrument is greatly simplified, and as it shuts on its own account, by the elasticity of the india-rubber ring, its application becomes very easy, thus requiring not the least ingenuity upon the patient's part (see figs. 4 and 5). As every particle of metal is avoided (except the small pin, running through the joint), and as the boxwood resists more than any other substance the corrosive influence of the vaginal discharges, it is lighter, will keep longer, and will cause less irritation than the other instruments.

The author found *four* different sizes, fitting to the greatest number of cases, viz.: for the measure from side to side,  $2\frac{3}{4}$ ", 3",  $3\frac{1}{4}$ " and  $3\frac{1}{2}$ ", and correspondingly the largest antero-posterior

diameter of every wing, 1" 3"', for the two largest sizes, and for the following, 1" 4"' and 1" 5"'.\*

The first application of the instrument ought to be performed by the physician himself, who has to choose the size required for every case. His judgment will be conducted by the sensation of the patient, after walking to and fro for awhile, and more so by the way in which the india-rubber ring contracts. If the extra-vaginal portion is not shut entirely, the instrument is too large, and has to be removed; if it shuts too quick, a larger one must be chosen. The following duties devolve upon the patient herself, viz., removing and cleaning it at bed-time, and readjusting it before getting up in the morning. This is performed by seizing the buttons at the lower end, and while separating them from each other, as much as possible, the other end of the instrument is to be gently introduced into the vagina till it cannot go any further; and (when left alone) now it shuts on its own account. The same way is followed in its extraction. Before its introduction, it ought to be well oiled. In order to render this pessary even more harmless, it is advisable to cover its branches with a kind of glove, made of soft deer-skin, which coat may be moistened with cod-liver oil before every application.

Of great importance is the breadth and direction of the pubic arch, because this is the chief guide for the selection of a pessary. It can be ascertained by introducing the second and third finger behind the arcus and expand both fingers till each of them touches one side of the arcus. The distance of the fingers thus obtained may guide our judgment in the choice of an instrument. As a general rule it may be stated, that a comparatively small instrument ought to be tried first, because it very often happens, that even the most extensive prolapsus is benefited by small instruments.

After the instrument has been closed, the patient must be questioned as to what her sensations are. If the instrument was too large, a singular kind of smarting is perceived and considerable

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\* The instrument has been modified in the construction of the joint after my suggestion, so that the pessary can be easily taken in two lateral pieces, thus allowing a more thorough cleansing, while even the small metallic pin of Dr. E.'s pessary is avoided. Sold by G. Tiemann & Co., No. 63 Chatham Street, New York. Lately Mr. Russel has modified for Dr. Savage, of London, Mr. Zwank's instrument, in such a way, that the metallic screw is avoided, and from a sketch of it in the *Medical Times and Gazette*, we should think that the modification is a very happy one.

uneasiness expressed. It is a good plan to have the patient walk around, in order to ascertain if the prolapsus will be perfectly retained by the instrument.

Even in cases where the perineum has been ruptured, our instrument has been used with perfect success ; the only precaution to be taken, is the choice of a broad pessary.

On the second day after the application of the instrument, the patient must be seen again by her attending physician, because at this time generally certain symptoms occur, which originate from the presence of a foreign body in the vagina, and which prove, *if they are very intense*, that the instrument is too large.

The symptoms alluded to, are a chilly sensation, heat, headache, trembling, nausea, want of appetite, obstinate constipation. The instrument must be removed, and the vagina must be examined with the speculum, to see if a portion of it is inflamed or ulcerated, a condition always met with, if the instrument chosen was too large. After the third day is over, chills and heat are very trifling, and disappear entirely some time afterwards.

If the instrument is borne after some days with no discomfort at all, the patient must be taught how to use it, and must repeat the manœuvre of adjusting and removing it several times in the presence of the physician.

At the time of the monthly courses, the patient had better have the instrument removed, provided she can keep quiet. At times it happens, that a portion of the anterior wall of the vagina falls beneath the pessary. In this case, a broader instrument must be chosen, or a small piece of plugged linen must be placed in the midst of the instrument, corresponding with the prolapsed portion, which is easily retained by this contrivance.

In recommending these instruments, and especially the latter one, to the consideration of the profession, I am sustained by the experience of our European brethren, who have used them with such general satisfaction, that scarcely any other form is now in use. Lately Dr. A. Mayer, of Berlin, has published a paper on the use of Zwank's pessary, wherein he reports to have successfully applied it in two hundred and thirty cases. For my own part, I avoid the use of pessaries as much as possible. But I have had under my care a number of cases, in which a pessary was the only means justifiable. I have tried a great variety of them, and have now come to the conclusion that Zwank's (or Eulenburg's)

hysterophor answers better the requisites of a good pessary than any other.

I, therefore, ask practitioners to give it a fair trial. I do not mean to buy a hysterophor, and sell it to the next woman with prolapsus uteri, but after carefully selecting the case, in which nothing but a good pessary will give sufficient satisfaction, let the different sizes be tested, until the proper instrument is found.

## ARTICLE IV.

*A Contribution to the Pathogenesis of Uterine Polypî.* By E. NOEGGERATH, M.D.

Mrs. Fischer, of New York, apparently a healthy woman, was delivered on the 12th of July, 1858, of a strong, living child, after a short and easy labor. She was attended by Dr. Rupprecht, to whom I am indebted for the history of this case. Soon after the child was born, the placenta was found lying in the vagina, near the os externum, and removed without the least difficulty. The doctor left in about an hour, but was scarcely at home, when he was summoned back to the patient in haste, as the woman was "swimming in blood." On his arrival, the hæmorrhage had already ceased spontaneously, the uterus was found well contracted, and as nothing seemed to indicate any farther apprehension, the patient was quieted, and stimulating drinks ordered to be taken.

During the following days everything proceeded as well as could be expected, secretion of milk and lochial discharge in the best condition. At about the ninth day after this, the woman remarked another show of blood, which, however, did not seem to be serious enough, to call for actual treatment. A strengthening diet, combined with the use of tonics, was recommended, and successfully so, as the discharge diminished, while the patient was gaining strength. But this condition did not last very long. After a lapse of four days, the blood began to flow anew, and in such quantities, that it occasioned serious apprehensions. Under these circumstances, Dr. Rupprecht insisted upon a thorough examination of the parts involved; on passing his forefinger into the vagina, he detected a large tumor filling the entire space of the vagina. This body was of the size of a large hen's egg, per-

fectly smooth, round, and somewhat flattened on its upper extremity, where it was firmly attached to the anterior lip of the vaginal portion. This attachment was so firm, that by moving the tumor, from right to left, the entire uterus was displaced sideways.. This examination, although performed with the greatest care, produced an alarming increase of the hæmorrhage. From these symptoms, and his examination together, Dr. Rupprecht concluded that she was suffering from a polypus of the womb, which ought to be removed as early as possible. He accordingly prepared to perform the operation, with the assistance of Dr. Michaelis, who agreed with Dr. R.'s diagnosis. But the patient insisted upon calling in a third physician. Consequently, Dr. P—— met them, and after examination, declared that the case was not one of polypus, but *inversio uteri*. But as neither Dr. Rupprecht nor Dr. Michaelis coincided in this opinion, it was decided to have Dr. Krackowizer's opinion. The latter gentleman began his examination with the forefinger, to which he added the third finger, in order to circumscribe more easily the entire surface of the protruding mass. He found that the lower surface of both uterine lips was imbedded in the tumor, and he confirmed in every other respect, the results of Dr. Rupprechts examination, as given above. In the process of examination, Dr. Krackowizer directed his fingers so that they held the vaginal portion between them; and when pressing downwards upon the polypus, he had the sensation as if something yielded, which induced him to increase the pressure, when suddenly the polypus separated from its place of attachment, and was easily extracted from the vagina, after which the hæmorrhage ceased entirely.

The polypus was removed on the morning of July 25th, and I had occasion to examine it on the same day at three o'clock, P. M. It was of a spherical form, its longest diameter being about  $2\frac{1}{2}$ ". The entire mass was perfectly smooth, and seemed to be lined with a proper membrane. The continuity of this membrane was broken at the lowest section of the tumor, and on this portion a cleft  $\frac{1}{2}$ " long could be observed, which, running from right to left, partly disclosed a fibrous, bluish-white heterogeneous substance, which, upon closer examination, proved to be an obliterated blood-vessel. The upper aspect of the tumor, instead of being smooth like the rest, showed an irregular, rugged surface in its middle portion, of about the size of a fifty cent piece. This

place looked very much like a fresh granulating ulcer, and was undoubtedly the seat of adhesion with the uterus. The entire mass was solid, and as hard as the normal uterine tissue. Upon dividing its deeper portions with the knife, it offered the color and consistency of muscular tissue, now and then interspersed with lighter tendinous stripes, which ran in every direction. We were altogether at a loss what to make out of this tumor, and it was left to the microscope to throw sufficient light upon its true nature. For when a small section of it was examined, it became evident, that the whole mass consisted chiefly of shriveled tufts belonging to the chorion. And, consequently, the polypus before us, was nothing but part of the placenta. We must add, that the tumor was entirely free from any offensive smell.

From the history of the case, it appeared not only that the physician removed the afterbirth without the least obstacle, but that it had already descended into the vagina, when its removal was attempted. This circumstance, as well as the regularity of its shape, induces us to believe, that the tumor in question, was a so-called placenta-succenturiata. The time when this placenta was detached from the cavity of the womb, must have been immediately (one hour) after delivery; it was preceded by a sudden and violent hæmorrhage, which ceased spontaneously. This symptom is always observed in cases where portions of the placenta or the membranes are retained in the womb, as every accoucheur will readily admit. After the mass had left the uterus, no hæmorrhage ensued until the ninth day. This was the time when reünion with the uterus was completed, and the oozing of blood, which, set in now, was caused by the same circumstance that causes the bleeding in cases of genuine uterine polypi. That this adhesion with the womb was not a mere agglutination, but an organic union, is proven: 1. By the fresh condition of the corpus delicti. It is well known that no substance undergoes putrifaction more readily than the detached placenta, especially when deposited in the vagina, where it is in free contact with the atmosphere and the vaginal discharges. 2. By the smoothness of its surface and the rounded shape, an attribute proper to living organic tissues. 3. By the appearance of the granulated part on its upper plane, which might be compared with the raw surface of a tumor just removed by enucleation or torsion. 4. By the bleeding following upon its being touched with the finger.

We therefore conclude, that this is an instance of migration of a placenta-succenturiata from the cavity of the womb, and re-attachment to its vaginal portion, with a tendency to be transformed into a uterine polypus. If the case had not been so promptly attended as it was by Dr. Rupprecht, if only its chief symptom, the bleeding, had been treated, as it is done too often under similar circumstances, the patient would have at the present day a polypus uteri, which, detached, perhaps, after a lapse of years, and removed with the knife, would not excite the least interest, the minute circumstances connected with the history of the case being lost and forgotten. Although not a few cases are recorded in our literature of placentas remaining in organic union with the uterus, we think that the observation just laid before our readers, is unique in its way, and may perhaps serve to throw some light upon the pathogenesis of uterine polypî.

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## ARTICLE V.

*Invagination of the Colon Descendens in an Infant, with Repeated Hemorrhages in the Colon Transversum.\** By A. JACOBI, M.D.

INVAGINATION of the intestines, from a merely anatomical point of view, is not a rare occurrence. Before and in the moment of death, the paralysis of the muscular tissue of the intestines progressing by degrees and sometimes unproportionally, invaginations of the jejunum and ileum are very frequent; indeed, so much so, as to be a very common result of a great many post-mortem examinations. The same alteration is not of the same frequency in the living, but wherever it occurs, it is generally known to be a dangerous disease. It occurs, in almost all the cases, in the jejunum and ileum, the intestina crassa being as it were exempt. The reason why this is so, is: 1st, the vast development and considerable strength of the muscular fibres of the intestina crassa; and 2d, their firm adhesion in the fossa iliaca. Now, in very young children, neither of these things are found; in them the muscular tissue of the colon is not very much developed, nor are there strong adhesions in the fossa iliaca. Therefore it is only natural, that there should be, in infants, cases of invagination of

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\* *New York Journal of Medicine*, May, 1858.

the intestina crassa, so very unusual in older children or in adults. Nevertheless, there are not many observations of such cases, and the literature of the subject is very poor, so much so, that a number of even the best manuals on diseases of children do not mention it. For this reason the profession is under the greatest obligation to Rilliet, who collected more than a dozen of well-authenticated cases, and described the disease in so masterly a manner as only Rilliet and Barthez are able to do. And for the same reason I think it important to relate the following case of invagination of the colon descendens, with its peculiar complication with enterorrhagia, in order to establish if possible the exact diagnosis of this dangerous disease by comparison.

**Case.**—D. S., a robust and vigorous boy of seven and a half months, was always lively and healthy from his birth. The only trouble, for which now and then medical advice was procured, were slight broncho-catarrhs; and the only thing remarkable in the external appearance of the child (being apparently brisk and healthy), was an uncommon paleness of the skin. Being exclusively nourished by breastmilk, he never once suffered from disorders of digestion, not even at the time when the first two lower incisors made their appearance. No particular alteration in the state of his general health was perceived up to the 1st of March, 1857, on which day, towards evening, the child began to grow restless and troublesome, crying all night and seeming to be feverish. This symptom being the only one to be perceived, it was not much thought of, particularly when the child, towards morning of March 2d, fell asleep and rested for some hours. About 9 A. M., the same day, he had an evacuation of the usual quality, after which he again slept; three hours later, about noon, he had another evacuation, with much pressing and straining, no fæces coming from him, but only some serous fluid mixed with a little blood, of red color. This symptom causing some alarm, I was sent for, and found, at 2 o'clock P. M., the following *status præsens*: Last normal evacuation at 9 o'clock A. M., first bloody one at 12, second bloody one at 1 P. M., of just the same quality as the first, with only a sign of fæces. The child is pale, but not more so than usually; looks uneasy, without having a particularly timid or anxious expression; cries aloud, in a fierce and abrupt manner from time to time, as from colic; the temperature of the surface in general, and of the head and extremities in particular, is normal. The



abdomen is soft to the touch ; there is nowhere a swelling to be felt ; no pain effected by pressing ; percussion yields the common tympanitic sound. Pulse 100, somewhat small, but rhythmical. The child has not taken any food for the last four or five hours and has not vomited. My diagnosis, after the foregoing symptoms and results of examination, being merely symptomatic, a dose of calomel was given ; the prognosis being sufficiently favorable.

*March 3, 9 o'clock, A. M.*—The child is much changed for the worse ; he is paler than ever, cheeks hollow, eyes sunk in the orbits ; he looks timid, anxious, restless ; cries often, but in a lower and more languid voice, and his extremities move in a much less violent manner than yesterday. Nevertheless, there is no change in the general appearance of the patient, skin and circumference of the extremities have not lost their former appearance, and the *embonpoint* does not seem to be diminished. Abdomen is soft to the touch, and without pain, when pressed, neither inflated, nor sunk. Only there is, in the left inguinal region, immediately above the *S Romanum*, a swelling offering some resistance to the finger of a longitudinal form, of about one and a half inches, and a lateral width of about one inch, which was not discovered there the preceding day. Nowhere in the colon could another pathological alteration be found, particularly not in the ileo-cæcal region. No fæces have been evacuated since yesterday, but there have been from twelve to fourteen passages consisting each of a drachm or two of serous fluid, some three or four of them being colored with hæmatine ; all of them being accompanied by painful straining and pressing. The child began last night to throw up everything he swallowed, pretty soon after having taken it, and continued vomiting, for ten or twelve times, through both the night and the following morning, bringing up nothing but some mucus and bile. Always, after the child threw up, or evacuated his bowels, he seemed more languid, anxious, and nervous, his nervousness increasing in proportion to his weakness. He does not seem to be very desirous of drinking. His tongue is moist, slightly covered with some white mucus. Pulse 120, very small, but rhythmical.—*Diagnosis* : Invagination of the lower part of the colon descendens.—The treatment consisted in the immediate and repeated injection of warm water, in order to relieve, if possible, the obstruction of the intestine, by pressing the invaginated piece out of the lumen of the bowel. Every effort proved unsuc-

cessful. The insufflation of the bowels, for the same purpose, was resorted to, and continued for a long while, with no better success. Both the injected water and air returned from the rectum at the moment the injections were being made; the intestine filling with water or being inflated with air exactly as far up as to the place where the swelling could be felt in the left inguinal region. Only once did I believe that a small stream of air passed the invaginated bowel. It has been observed in many cases of invagination, that some gas escaped through the obstruction. I then left the child, who was to have a warm bath and some doses of Hydrarg., mur. and extr. hyosc.

4 o'clock, P. M.—There is no material change. The child looks, if possible, more anxious, with a particular expression of his features, sometimes of nervous excitement, sometimes of total depression; temperature of the head and extremities normal; thirst increasing, pulse 130, small, contracted but regular. Patient vomited frequently since the forenoon, from twelve to fifteen times, and had about the same number of evacuations, which were even less bloody than the preceding ones; almost wholly consisting of a serous fluid. I think the amount of blood excreted in all the passages for the last two days, did not exceed one drachm. The same treatment as before was resorted to, but proved just as unsuccessful.

10 o'clock, P. M.—I saw the patient, in consultation with Dr. H., who recommend ol. crot. in large doses, in order to have the obstruction removed at all events. Besides, injections of warm water and air were resorted to again and again, but all our efforts proved wholly ineffectual in overcoming the obstacle. The patient was in about the same condition he was in the afternoon, only more depressed in his strength, his motions being slower and sometimes as it were tired, and his voice sounding duller and lower than before. The eyes deeply sunk in the orbits; the cheeks hollow; pulse 136, smaller, but always regular. Vomiting occurred only four or five times since the afternoon; bowels evacuated about as many times a serous and mucous fluid, without blood. *Fecal matter* appeared in neither of them; *no sign of it was ever brought up by vomiting*; only once there was a slight tinge of greenish color in the passage, which I felt at first inclined to consider as produced by the repeated doses of Hydrargyrum.

March 4th, 9 o'clock, A. M.—No more vomiting has occurred since

*last night*, but the bowels excreted some five or six times the same serous fluid, which had, this time, the smell of bloodserum undergoing dissolution. The child is sinking rapidly (although the body does not lose very much), and is anxiously looking around for help; the pulse is becoming smaller and weaker, 140; thirst increasing. The general condition of the patient remained the same during the day, the treatment being, as above described, repeated several times without giving the least relief. *No more vomiting.*

*March 5th.*—The last day did not bring any particular change in the course of the disease. *No vomiting occurred*, nor were evacuations of the bowels so frequent as on the previous days, nor was there blood contained in them. Hands, feet, legs, became cold, pulse 150, 160, small, contracted, at last scarcely to be felt. No loud crying was any more possible, only a whimpering heard from time to time. All the while the *abdomen was painless*, only very little tympanitic. The eyes were so much sunk into the orbits and the cheeks had become so hollow that it would have been impossible to recognize the child. During all the periods of the disease, the little patient was *conscious of himself*, and an anxious observer of what was going on around him: looking around for help as if knowing that every one was engaged in trying to relieve him; sometimes depressed by his rapidly increasing weakness, sometimes disturbed by a sudden nervous excitement, sometimes troubled by the often repeated excretion of some drops of serous fluid from the bowels. Finally, conscious almost to the last quarter of an hour, the patient finished his four days' dying shortly before midnight.

*Post mortem examination, March 6th, 10 o'clock, A. M.*—Only the examination of the abdomen was allowed. Rigor mortis. No unusual number of hypostatic spots on the back of the corpse. *A great difference is perceptible between the general appearance of the face and the other parts of the body*; the face being extremely thin, the eyes deeply sunk in the orbits, and the subcutaneous fat of the cheeks gone, the rest of the body pretty nearly retaining its usual and normal roundness and fullness. The abdomen is not very much inflated with gas; percussion yields a tympanitic sound; to the touch it is equally soft on all parts, only a slight swelling as described above among the symptoms of the disease, in the left inguinal region. After the integuments were opened, the following appearance presented itself: Stomach normal, without contents: the jejunum and ileum moderately inflated with gas, very

few contents in them. The colon ascendens normal, the ileo-cæcal valve shows nothing particular. The flexion between colon transversum and descendens not so manifest as it ought to be, being more a spherical curvature than a right angle. In the lower part of the colon descendens just above the S Romanum, a piece of the intestine has dropped, or is introduced into the next lower one, constituting a simple invagination of the colon, which was probably prevented by the S Romanum from growing larger than it is found to be. As usual in such cases, there is no difficulty in removing the invagination and bringing the several parts into their normal proportion. On the upper flexion of the intestine, where the invagination is beginning, there is a manifest hyperæmia, on the lower flexion ; inside the invagination, there is extravasation of blood between the membranes.

The colon transversum shows the following remarkable appearance : In its middle part, hanging down from the upper wall, there is a purely *fibrinous coagulation*, of a diameter of somewhat more than a third of an inch and two inches long, *between the serous and the mucous membranes of the intestine*, the muscular tissue being wholly destroyed ; the whole offering the clear signs of an extravasation having occurred long ago, of which nothing was left except the fibrine. Next to it there is *another fibrinous coagulum* of the same size and nature, with the exception, that it appears, from some pieces of coagulated blood being still attached to it, and from its not being so hard and dense, *somewhat less old than the former one*. *Third*, there is a coagulation, not fibrinous, but really bloody, of fresh appearance, but firm and dense. The mucous membrane, *which had been extended* by the two former hæmorrhages, of which the fibrinous coagulations have remained, has been *broken and lacerated by the third one*. The last coagulation *obstructs entirely the lumen of the colon*, its walls being extended by and closely adhering to the fibrinous and bloody contents. It is evident, that the last extravasation was sufficient to shut the colon up, after it had become more and more narrow without injury to its functions, by its former local hæmorrhages.

The results of this post-mortem examination do not fully agree with those which Rilliet tells us are found in the majority of cases. In most of them the invagination was of a larger size, because in another part of the intestine. They mostly occurred in the colon ascendens, and, there being no hindrance to their further devel-

opment, enlarged to such a size, as to implicate, sometimes, the whole colon between the ileo-cæcal valve and the S Romanum, in such a manner, that the flexures of the colon had wholly disappeared and the ileum seemed as it were to immerge directly in the rectum or the lower end of the *colon descendens*.

From this the positive statement of F. Rilliet (E. Barthez and F. Rilliet: *Manual of the Diseases of Children*, vol. 1, chap. xiii., art. 1), that in no age whatever can an invagination occur without the lower end of the ileum being the guide of the invaginated bundle, is evidently not in conformity with the facts, and is a premature exaggeration.

The invaginated portion, in the majority of Rilliet's cases had a dark red color, particularly the serous membrane; the mucous membrane participating in the inflammation and congestion and covered with dark blood and mucus. In one case there was only a limited hyperæmia and extravasation, although fully corresponding with the small extent of the invagination, the enlargement of which was apparently kept back by the normal impediment given by the *flexura iliaca*. It is generally stated, that in many cases an invagination of even a considerable extent cannot be felt during life; so much the more remarkable is the case above described, in which the anomaly, although small, was discernible by the touch soon after its occurrence.

A highly interesting feature in the whole number of facts resulting from the post-mortem examination, and not even thought of during the life of the patient, is the condition of the colon transversum. From the quality of the coagulations between the intestinal membranes, it is impossible to consider them as fresh productions; besides, no opening of a bloodvessel could be found, by which the hemorrhage could have taken place; weeks must have elapsed, since, at *different times*, *fibrinous coagulations were deposited*. The *last hemorrhage was a fresh one*, since it obstructed the whole lumen of the bowel and was able to lead, by itself alone, to death. It is not the least interesting fact, amongst all the foregoing ones, that the extravasated blood *coagulated so rapidly, as not to allow a drop or even the color of blood to escape into the intestine between the place of hemorrhage and the invagination*, not to speak of the small quantity of blood excreted by the passages, after the *invagination had occurred*.

As to the symptomatic importance of either the obstruction by

hemorrhage and the occlusion by invagination, there can be no doubt, in my opinion. I do not hesitate to say, that the symptoms of either of these anomalies, during life, must and would have been the same, if only one of them had occurred ; for the general effect of either of them, as well on the lumen and function of the intestine as on the whole system must be equally destructive. Of some diagnostic importance is the fact, that, although the coagulations in the colon transversum were firm, solid, and as large as I have described, at all events a great deal larger and more solid than the invaginated part of the colon descendens, this one was soon discovered, while the former one could not be found, neither by repeated palpation nor percussion ; this is a fact, which corresponds with Rilliet's remarks on the *difficulty of finding, sometimes, even large and solid invaginations in the living subject*. The question arises, which of the two, the invagination, or the obstruction of the colon by hemorrhage, occurred first. In my opinion there can be no absolute certainty about the answer ; but the following remarks may, perhaps, be thought sufficient to elucidate the subject. It is a fact, that two local hemorrhages occurred a long time before the invagination took place, and on the same spot, where the third and last one was to occur later ; I do not feel enabled to say, whether there was a local predisposition to hemorrhage in only one blood-vessel, it being too large or too thin, or abnormal in some other way ; or if there was a general disposition, in all the internal organs of the child, to hemorrhage, which resulted, perhaps, from a comparative hyperæmia of the abdominal organs, corresponding with the continual paleness of the child, while robust and healthy. A further fact is this, that the invagination occurred *below* the bloody obstruction of the intestine, and it is highly probable, that after the hemorrhage occurred, the muscular motion below it would have been, if not stopped entirely, at least diminished. If, on the contrary, the invagination had taken place above the hemorrhage, there would be more probability of the former having been produced by the increase of the anti-peristaltic movement of the intestine. As the facts are, I am rather disposed to say, that the *invagination was the primary abnormality*, and the cause of the small quantity of bloody discharge excreted through the anus ; and that the hemorrhage, to which a predisposition was clearly present and cannot be well denied, ensued as soon as a strong anti-peristaltic motion of the mus-

cular tissue of the intestine set in. There are, then, two different causes of death, both almost equally dangerous; both likely, with the same symptoms in the living subject. Finally, I have no doubt, that had no invagination occurred, probably the third hemorrhage would have occurred a short time afterwards, and led to certain death, under the same or similar symptoms as the ones related.

As to the symptoms of the case reported, I have only a few remarks to make, as the symptomatology given by Rilliet is most complete and able. His description fully corresponds with what I had occasion to relate. The only facts which, in my case, seem to be worthy of particular attention are these: that, first, the thirst of the child, which has been said to be usually not extraordinary, kept increasing in proportion to the duration, and to the approximation of the fatal end of the disease; and second, that vomiting, never bringing up fecal matter, in opposition to what is always observed in cases of invagination in adults, stopped full two days before death, although the post-mortem examination did not give the least evidence of mortification, or even inflammation.

## ARTICLE VI.

*On the Oxysulphuret of Antimony as an Expectorant in Inflammatory Diseases of the Infantile Respiratory Organs.\** By A. JACOBI, M.D.

THE oxysulphuret of antimony, although mentioned by Basilus Valentinus in the fifteenth century, was made known for the first time in 1654 by Glauber, who prepared it while operating on the metallic antimony. Although generally well known from that time, there is scarcely another chemical preparation for which more different modes of preparation have been recommended, the chemical composition of which has been sought in more different ways, and the pharmaceutical and medical reports on which are more various and even contradictory. Now, it not being our intention to write a treatise on the chemical constituents of the oxysulphuret of antimony, we shall rest satisfied with merely laying before our readers what we sincerely believe to be the best method of preparing this remedy—one we have largely employed in our

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practice, and the results of which we are about to give to our professional brethren.

The sixth edition of the *Prussian Pharmacopœia* (1846) gives the following prescription for preparing the oxysulphuret of antimony: 3 pounds of common carbonate of soda are dissolved in an iron vessel in 15 pounds of water, and are well mixed with a pound of lime made half fluid by three pounds of water, with 2 pounds of the black sulphuret of antimony, and with 4 ounces of flowers of sulphur. This mixture is to be boiled for an hour and a half, the evaporating water being always compensated by filling up anew. The remainder is again boiled with 6 pounds of water, filtered and washed out with hot water. The fluid is made to crystallize. The crystals are washed out with distilled water which has been mixed with  $\frac{1}{16}$  of potassa, and afterwards dried. One pound of them is dissolved in 5 pounds of water, the whole filtered and diluted again with 25 pounds of water. A mixture of  $4\frac{1}{2}$  ounces of sulphuric acid and 8 pounds of water decanted after refrigeration is then added. The sediment is filtered, washed out with common water at first, and with distilled water afterwards; is then pressed out between blotting paper, dried in a dark place, in a temperature of  $77^{\circ}$  Fahr., reduced to powder, and kept in a dark, well-closed vessel.

We omit the description of any physical and chemical qualities of this preparation, but give the analysis of Berzelius and H. Rose, the best analytical authorities. Both of these declare it to consist of 2 atoms of antimony and 5 atoms of sulphur ( $\text{Sb}^2 \text{S}^5$ ), or of 61.59 equivalents of antimony and 38.41 of sulphur. It has been called by Liebig the persulphide of antimony.

We have given in full the mode of preparing this drug, which we make use of in our practice, for obvious reasons. The principal objection to the oxysulphuret of antimony has always been that it was so extremely liable to decomposition as not to be administered with any degree of surety. It has been asserted that there is always oxide of antimony formed in what is presumed to be the genuine article, and undoubtedly it is very often found. Sulphur too is formed, even in the shape of sulphuric acid, from decomposition induced principally by the influence of air and light. As to the latter influences, and those of a similar kind, it is evident that it is not the fault of the chemical preparation, if the conditions necessary to its unaltered state are not given. Nitrate of silver



in solution, prussic acid, and many chemical substances require the greatest care in preserving them; nevertheless, no one ever ventured to object to their administration in medical practice. It is true that great care has to be taken in preparing our medicament; that it requires washing out finally in distilled water instead of common water; that it needs to be dried slowly at a certain temperature, and kept under peculiar external conditions; it is true, besides, that the many other ways of preparing it are unsafe and give rise to decomposition; but after all, we see no reason to declare a substance to be subject to decomposition, if it can be proved that it is easily decomposed only when made by a wrong process and kept under unfavorable circumstances.

Another objection to the medical use of the oxysulphuret of antimony has been, that it is soluble in alkalies, and might undergo decomposition in the stomach when the secretions happened to be abnormally alkaline. It has been asserted that it is decomposed too by acids, however slight they be. Now, we are unable to see, if indeed decomposition would easily take place, why a medicament ought not to be given for such a reason. If the secretions of the stomach are too alkaline, make them less so; if acid drinks will decompose your medicine, do not administer them. There are a great many other medicines requiring the same and more precautions; it has never been urged as a reason against the medicinal use of the nitrate of silver, that its tendency to decompose, either by the secretions of the stomach or by ingested food, makes it unfit for internal administration.

The truth is, that the oxysulphuret of antimony has not been in general use for a long time; twenty-five or fifty years ago it was highly estimated, but the majority of writers at the present day, appear to scarcely know of its existence. In order to show this, we will give some literary notices, particularly such as have been taken from authors on infantile diseases, it being our object to communicate a few observations on the mode of operation of the oxysulphuret in diseases of children, and to recommend it for further use. We will premise that we desire our readers to give their special attention to the dose of this remedy, it being our firm conviction, after a great number of observations, that the want of success often complained of in its administration, and the want of confidence in its power, is but the consequence of an entire mistake as to the amount to be given.

Behrends administered one grain every two hours in the second stage of pneumonia, when expectoration was deficient and strength was failing, in combination with camphor and benzoic acid. Jahn gave one grain three or four times a day, in pulmonary catarrh, with opium and camphor. Richter gave one grain twice a day, in acute catarrh of the stomach, with tartrate of potassa, and two grains twice a day, in chronic arthritis, together with calomel and aconite. Brera employed a fourth of a grain every three hours, in painful arthritic affections, with morphine. Lessing gave one grain and a half three or four times, in chronic pulmonary catarrh.

From these quotations it is evident that it was impossible from the manner of administering this remedy, in combination with others frequently of the same class, to decide on its effects; and further, that the dose seldom exceeded one grain, and only in exceptional cases reached as high as six or eight grains in the course of a day. It is, moreover, to be kept in mind, that such are the doses administered to adults.

In looking over the literature of diseases of children, we find as many negative as positive facts; that is to say, there are as many writers who do not even mention the name of this article, as there are who recommend it highly. In the oldest pædiatric literature, even in Nils Rosen von Rosenstein's work, the oxy-sulphuret of antimony is not mentioned. Jahn (1803) says, it has been recommended by some in whooping cough.

Henke gave half a grain twice a day, together with half a grain of powdered herb of belladonna, in whooping cough. Tourtual gave a quarter of a grain, with three grains of sulphur, three times a day, in pseudo-croup, and the second stage of inflammation of the trachea. Dornblüth used a quarter of a grain every three hours, in pneumonia of children of one year of age. Wendt gave the same quantity, in the like disease, four times a day, to children of from three to four years of age. Hinze gave half a grain every two hours, with oxide of zinc and musk in whooping cough. Meikisch, who wrote his "Contributions to the Knowledge of the Infantile Organism" at about the same time (1825), neither recommends nor mentions it. Wenzel (1829) prescribed it in pneumonia, to a child of one year of age, a third of a grain to be taken three times a day; to a child of two years of age, either half a grain four times a day, or a quarter of a grain twice a day, or a sixth of a grain to be taken every hour; in measles, to

a child of two years of age six doses of half a grain each, every two hours ; to a child, one year old, twelve doses, of an eighth of a grain each, to be taken four times a day. Rau (1832) considers it to be a powerful expectorant, in a dose of a sixth or a quarter of a grain, in infantile pneumonia, after the height of inflammation and fever is over, and where the accumulation of phlegm in the bronchia forbids free breathing. Meissner (1832) mentions it as an expectorant, but does not appear to expect much of its administration. After this period, the oxysulphuret of antimony is seldom mentioned, and never so strongly recommended as before. It is true, that Cruse (1839) in his work on infantile bronchitis, speaks of it as an expectorant, but he frankly states that he prefers the anisated liquor of hartshorn.

Fuchs, in his monograph on infantile bronchitis (1849), merely mentions its name, but as early as 1837, Seifert did not think proper to name it among his medicinal agents, in his monograph on the broncho-pneumonia of new-born infants and nurslings. Moreover, there is perhaps no manual on infantile diseases, of the last twenty years or more, which takes the least notice of it, whereby sufficient proof is given, that the recommendations of some of the earlier writers were not confirmed by the experience of their successors. In the manuals of the following authors : Valleix, Barrier, Underwood, Coley, Evanson and Maunsell, Stewart, Eberle, Legendre, Dewees, Hennig, Meigs, Condie, Churchill, Bednar, West, Rillict and Barthez, Bouchut, and Tanner, not the slightest mention is made of the effect of the oxysulphuret of antimony as an expectorant.

In the works of some of the latest writers we find similar remarks. Anton, in his collection of prescriptions, employs in pneumonia of children of from eight to twelve years of age, a quarter or one-half of a grain. Joseph Schneller, in his "*Materia Medica, applied to the Diseases of the Infantile Age*" (1857), while saying, that it is administered in long continued catarrh, bronchial blennorrhœa, in croup, when the more dangerous symptoms are disappearing, in whooping cough, as a diaphoretic and expectorant, speaks of doses of an eighth or a quarter of a grain each, to be taken three or four times a day. The pharmaceutical writers of the present day offer similar remarks : Schroff, of Vienna, speaks of several daily doses of from a quarter of a grain to a grain each ; Schuchardt, of Gottingen, has from a quarter of

a grain to two grains, and allows even five grains in exceptional cases. Oesterlen, of Heidelberg, whose doses are believed in Germany to be generally very high, speaks of doses of from one to four grains, to be given several times a day. Sobernheim recommends a quarter or one-half of a grain, sometimes even one or two grains, to be administered two or four times a day. All these doses are considered to be normal doses for adults. While, then, authors on pharmaceutics and therapeutics deem it their duty to register anything that has been said on any pharmaceutical object, pathologists of the present day, especially such of the last year, as Wunderlich, Leubuscher, Niemeyer, either entirely overlook this antimonial remedy, or have very little indeed to say in its favor. Finally, from "Thomson's Conspectus of the British Pharmacopœias," seventeenth edition, 1852, we copy the following notes on the oxysulphuret of antimony : "Operation : emetic, diaphoretic, cathartic, according to the extent of the dose ; alterative, used now only for forming Plummer's pill. Use : for chronic rheumatism and obstinate eruptions. Seldom ordered. Dose : gr. i. to iv. twice or thrice a day, in a pill." The "Dispensatory of the United States," eleventh edition, p. 929, pronounces the very same opinion : "The precipitated sulphuret of antimony is alterative, diaphoretic, and emetic. It is, however, an uncertain medicine, as well from the want of uniformity in its composition, as from its liability to vary in its action with the state of the stomach. It is seldom given alone, but generally in combination with calomel and guaiacum, in the form of Plummer's pill, as an alterative in secondary syphilis and cutaneous eruptions, or conjoined with henbane or hemlock in chronic rheumatism. During its use the patient should abstain from acidulous drinks. Its dose as an alterative, is from one to two grains twice a day, in the form of a pill ; as an emetic, from five grains to a scruple."

From the facts thus selected from the authors of more than the last half century, it becomes evident that there is a great variety of opinions as to the operation of the oxysulphuret of antimony. While believed to be, at a certain period, a highly valuable remedy in different morbid conditions of the organism, or inflammations of the respiratory organs, scrofula, rheumatism, arthritis, blennorrhœa, diseases of the lymphatic glands, of the skin, and of the pulmonary nerves, it has been again considered to be so valueless as not to attract the least attention from the medical

writers of the last twenty years. We believe the reason may be found in the fact we insisted upon above, that the majority of preparations have been uncertain, because of their being badly made ; and in the further fact, that medical practitioners followed more the theoretical impression of the caution required by antimonial medicaments in general, than their own careful observations on the mode and strength of the operation of the precipitated oxysulphuret.

Thus, what we are going to prove next is, that the doses given have been incompetent and insufficient for any considerable result : and that what is put down as the highest dose to be administered, is scarcely proper to begin with even in the slightest affections.

It is well understood by our readers, that the larger doses of one grain, etc., as above mentioned, are to be taken as the quantity allowed for adults. If these doses were to be reduced to the proportion necessary for infantile diseases, we shall, after having reported our practice and the results of our doses, appear more justified in saying that the difference of opinion and the want of confidence is entirely due to the insufficiency of the doses administered.

Before making some general remarks on the indications, we annex the subjoined list of cases taken from the journal of the children's department of "the German Dispensary of the City of New York," which, for the use of our readers, has the number on the journal, the sex and age of the patient, the diagnosis, and the doses of the oxysulphuret of antimony ; all the cases occurring in the first eight months of 1858. We shall add some observations taken from our private practice :

No. on Journal	Sex.	Age.	Disease.	Dose of oxysulph. of antim.	Continued.	Combined with
7	F.	Yr. Mo.				
9	M.	2	Pneumonia, left, inf.	1½ gr. every 2 hours.	4 days.	
158	F.	3	" " sup.	1 gr. 4 times a day.	12 "	
216	F.	9	" bilat. sup.	1 gr. every 2 hours.		
265	M.	6	Hooping cough, cat.	¾ gr. 4 times a day.		
281	F.	5	" " "	1½ gr. "		Extr. bellad. ¼ gr.
290	F.	4	" " "	" " "		" "
300	M.	1	" " "	1½ gr. every 2 hours.		" "
311	F.	9	" pneumo'a.	3 gr. 4 times a day.		
313	F.	3	Pneumonia, left, inf. after measles.	2½ gr. "		Sulph. chin. ½ gr.
326	F.	3	Hooping cough, cat.	1 gr. "		Extr. bellad. ¼ gr.
355	M.	2	Pneumonia.	2½ gr. "		Sulph. chin. ½ gr.
370	M.	7	" left, sup.	2 gr. "		
397	M.	1	Bronch. cat.	1 gr. every 3 hours.		
410	M.	5	" " "	1 gr. "		
457	M.	2	Hooping cough, cat.	¼ gr. every 2 hours.	4 days.	
486	M.	8	Bronch. cat.	2 gr. 3 times a day.		Extr. bellad. ½ gr.
541	M.	1	Hooping cough, cat.	1½ gr. every 2 hours.	2 "	
610	F.	2	Bronch. and gastr. cat.	1 gr. 4 times a day.	12 "	Extr. bellad. 1-6 gr.
628	M.	1	Bronch. cat., emphys.	1 gr. every 3 hours.	2 "	Sulph. chin. ½ gr.
691	M.	2	Hooping cough, cat.	2½ gr. 3 times a day.	6 "	
709	F.	4	" " "	1½ gr. "	8 "	Extr. bellad. ½ gr.
826	F.	6	" " "	1 gr. 4 times a day.	6 "	" ¼ gr.
981	F.	1	Bronch. cat.	1 gr. every 2 hours.	12 "	
1000	F.	7	" " "	1 gr. 4 times a day.		
1134	M.	5	Hooping cough, cat.	¾ gr.		Extr. bellad. 1-6 gr.
1144	M.	1	Pneumonia, left, inf.	1 gr. every 3 hours.		
1160	M.	1	Pneumonia, left, sup.	1 gr. every 2 hours.	4 "	
1168	M.	2	Ditto, Hooping cough.	1 gr. "	2 "	
1172	M.	3	" " "	2 gr. "	2 "	
1176	M.	4	" " "	3 gr. 4 times a day.	8 "	Extr. bellad. ½ gr.
1261	M.	2	Bronchopneumonia.	2 gr. every 2 hours.	6 "	
1370	M.	1	Pneumonia, h. cough.	2 gr. "	4 "	
1373	M.	1	" right, middle.	2 gr. "	6 "	
	F.	3	Hoop. cough, br. cat.	1 gr. 3 times a day.		Extr. bellad. 1-6 gr.
	M.	1	Pneu. right, sup., tub.	1½ gr. every 2 hours.	4 "	Sulph. chin. ¼ gr.
	F.	2	Pneumonia, left.	1 gr. "		
	M.	1	Pneumonia, right, inf.	2 gr. "		

Of this number two patients died ; one of pneumonia combined with measles, the other of quite recent pneumonia of the inferior lobe of the left lung, for which she had not been under treatment, after her hooping cough subsided. All the others recovered.

The general result of the dispensary was also obtained in our private practice. We remember a great number of patients of a year and under, who took a grain of the oxysulphuret of antimony every two hours, even every hour, without vomiting more than once or twice, some without vomiting at all. The same occurred with children of two or three years of age, who took doses of two grains, four, and even six or eight times a day, without showing any other result than the desired one. We recollect the case of a boy of two years four months of age, in the basement of No. 158 Leonard street, who while suffering from a severe double pleuro-pneumonia, after having for a while taken somewhat smaller doses, took for

four days, either a dose of two and a half grains every hour, or of five grains every two hours ; he did not vomit more than once, and that easily, in twenty-four hours, and did not show more than a trace of the doses in the passages, of which he had one daily, before the end of the second day. The pathological alteration of the lungs and pleura was such, that the prognosis was unfavorable from the beginning ; but the purpose of the administration of large doses of the remedy was readily accomplished as the patient, in consequence of his easy and copious expectoration, avoided the death of suffocation.

A boy of six months of age has been under our care for the last week, who has taken, every other hour, a dose of a grain and a half, while in the second stage of pneumonia of the left lung. It is true that the infant vomited after the first four doses, but he did not feel the worse for it ; only on the third day of his taking the remedy it would be found in the passages, which were not particularly changed from their general normal appearance. When, indeed, children are vomiting after the first, or one of the first, doses of the medicament, we do not see any harm in it ; the bronchial secretions cannot be removed in a quicker and generally safer manner.

We omit giving further special reports on individual cases ; the diseases we refer to are so common as to be the daily anxiety of every practitioner ; and every one will be capable of proving the accuracy of our observations, and the truth of our remarks very speedily. After the favorable results above reported, by means of large doses of the oxysulphuret of antimony, we trust the profession will resort to larger doses, and thus again introduce into their practice a long-forgotten remedy.

But it cannot be too strenuously urged, that the indications for the use of this medicine in inflammatory diseases of the infantile respiratory organs, ought not to be overlooked. Whoever contends against the fever of the first onset of pneumonia with the oxysulphuret, will feel sadly disappointed as to the final result.

Whoever treats acute bronchitis in the same manner, will soon become aware of his mistake. Its operation is only to liquefy the secretion of the mucous membranes of the respiratory organs.

We think it may be well compared to the preparations of mercury ; in the same manner as these effect the liquefaction of plastic exudations and alter the plastic quality of the blood, the oxy-

sulphuret of antimony effects the liquefaction of the secretions of the mucous membrances of the respiratory organs. How this is done it is impossible to determine. At all events some effect on the respiratory nerves is also produced, and possibly much of the result is the consequence of their altered functions. How far, besides, the mucous membranes of other systems are subject to the operation of the medicine, our experience does not fully enable us to say.

It has been used, and is used by us, in inflammations of the larynx, trachea, bronchi, bronchia, and lungs. After the inflammatory fever is removed, and the disease has reached its highest development, it ought to be given alone, or in combination with other agents, in full doses. Not before this stage of the disease can this effect be obtained. We have generally been fortunate enough to see a speedy recovery follow its administration. We need no add, that it renders the best services in common bronchial catarrh, where full and speedy expectoration is wanted. Such were the indications for the use of the oxysulphuret of antimony at the time of its cautious administration, long before it appeared to be almost entirely forgotten, particularly in the United States and Great Britain. But the want of knowledge as to its proper use, seems to have impaired the success due to it when used right.

There is but one writer, Neumann (1840), who went as far as to prescribe to adult patients, doses of six or seven grains without producing vomiting, and to confess that he did not see an objection to giving, if necessary, a dose of twenty grains. To this remark, and to the fact, that this remedy has been recommended, and administered by us also, in a few large doses daily, in pulmonary emphysema, and, finally, to a remark in Rilliet and Barthez's Manual (vol. iii. chest, chap. viii. art. ix.) on the use of from five-sixths of a grain to thirteen grains, in some cases, of the mineral kermes, another, but not so safe a preparation of antimony, we owe the first idea of introducing into our practice the oxysulphuret in large doses. We had abandoned it years ago, tired and disappointed with the entire want of success in the use of the small doses taught by the manuals on materia medica.

We are aware of the objection to large doses of this remedy, that it cannot but sometimes produce excessive vomiting. Such a case might occur, but could easily be remedied by diminishing



the dose ; there is no remedy against which individual idiosyncrasies will not prove rebellious, although given in small doses.

Generally, vomiting will not prove of any importance ; at least we have been taught so by experience. Furthermore, it is to be kept in mind that there are influences which may be avoided by careful management ; it is well known, for instance, that nauseating remedies, although in small quantities may operate as emetics ; thus, a little tartar emetic will, when dissolved in a large quantity of water, prove to operate as an emetic and purgative. On this principle the oxysulphuret of antimony, too, could have a nauseating effect, when brought into further contact with the whole surface of the mucous membrane of the stomach ; it is even possible, in our opinion, to produce diarrhœa by diluting the remedy by copious drinking of sugar-water, or similar things. All this will have to be avoided.

We are less afraid of diarrhœa being produced by spontaneous chemical decomposition, especially by formation of the oxide of antimony, for acids and alkalies can be avoided, and kept from coming into contact with the oxysulphuret, and diet may always be regulated according to circumstances. Further, we scarcely recollect a case where diarrhœa of any importance followed the administration of our medicament ; at all events, there was none, the cause of which we could look for in the antimony. Third, our preparation, when found in the evacuations of the bowels, is not decomposed.

As to the fact, that the oxysulphuret of antimony is found in the passages a day or two, or three, after commencing its administration, we have had the objection made to our large doses, that they are worthless because of their leaving the organism without exercising any influence. Now we have often experienced the fact, that no difference can be found as to the time (usually the second or third day) when the medicament is visible in the fæces, whether it has been given in large or small doses. Besides, we do not know exactly what the mode of its operation is ; perhaps it is not necessary at all to have it entirely dissolved and taken into the system in order to see its full power developed ; and besides, we know very well that other remedies appear in the fæces very soon after their having been swallowed, and, like the iron in its several forms and combinations, lose nothing of their medicinal effect.

The last objection to the oxysulphuret of antimony has been, that it belongs to the class of nauseating remedies, and will, undoubtedly, when taken any length of time, affect the appetite of the patients, and thereby injure their strength. Now, we desire our readers to remember what the indications are which require its administration. An inflammatory fever has just been removed by an antiphlogistic treatment; the assimilating functions are almost entirely gone; there is still a fever, and the necessity, at the same time, of furthering the secretion of the mucous membrane and removing exudation. This is the period for the employment of this drug. The appetite cannot be affected by the medicament, for there is none; if there was, in spite of fever and inflammation, it would be better to impair it, in order to keep the digestive functions as inactive as possible. At a later period of the disease, or where danger arises from anæmia, it is certainly necessary to think of the stimulation of appetite, digestion, and assimilation. Then the oxysulphuret of antimony may be combined with iron, with quinine, with rhubarb, or nux vomica, etc., each of which has its own indication. One remedy cannot answer all indications.

We have a single additional remark to make. Our therapeutical observations have generally taught us, that wherever a remedy is really and fully indicated, it is tolerated in large doses. Thus, we have the firm conviction that the large doses of the oxysulphuret of antimony, recommended above, will surely be adopted in general practice, as has been the case with the tartar emetic since the times of Peschier and Rasori, and with the opium since the ingenious and important discoveries of Clark.

## ARTICLE VII.

*On the Etiological and Prognostic Importance of the Premature Closure of the Fontanels and Sutures of the Infantile Cranium.*

By A. JACOBI, M.D.

THE development of the various organs of the infantile body generally proceeds in an equable measure. Only the skull, with its contents, seems sometimes to form an exception to this rule. Compared with the whole body, the infantile head is large; its blood-vessels are in due proportion to its size, and before the closure of the sutures, the blood-vessels of the brain and of its

membranes, finding less resistance from outside pressure, are expansible in a higher degree than are those in other parts of the body. In consequence, then, of increased upward motion of the blood, we find that in children the development of the skull, jaws, and teeth, and the frequency of inflammatory and exudatory diseases of the brain and its membranes, go hand in hand; they are coördinate effects of the same cause. The bones of the infantile body develop themselves with the same equability as its other parts. Protracted teething, retardation of the closure of the fontanels, retardation of walking, usually coëxist, and are not at all favorable symptoms, being but too frequently the first signs of rachitis. Nor is prematurity of teething, of closure of the fontanels, and of walking, very rare. One fact, however, must not be overlooked here, viz., that the head and upper extremities, in their normal state, contain more lime, proportionately, than the pelvis and lower extremities. This fact is well understood, and explains the pathological alterations as well in the lower extremities as in the cranium, morbid tendencies going to develop mollification in the former, sclerosis in the latter. Indeed, all the cases of genuine sclerosis of the cranium, that have been reported in literature, seem to have commenced in early life.

Other exceptions to the rule, in which the skull is developed in proportion to the other bones, are frequently found, the causes of which can hardly be defined. Both parental constitution and maternal blood are, no doubt, of some influence. This is, however, not without restriction, as robust children are frequently born of weak mothers, and *vice versa*; but it has been shown by Spöndli,\* that large maternal skulls have a great influence on the development of that of the infant.

Climatical and typical peculiarities seem also to account for some of the differences in the formation of the cranium. Thus, Edwards† asserts that in the West Indies the coronal juncture is broad, and remains open for a longer period than in cold countries. As to the custom of the natives, of pressing downwards the os frontis and os occipitis, he thinks it might be explained by the instinctive endeavor to effect an earlier closure of the fonta-

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\* Heinrich Spöndli, *die Schäeldurchmesser des Neugeborenen und ihre Bedeutung*. Zürich, 1857.

† L. A. GOSSE: *Essai sur les déformations artificielles du crâne*. Paris, 1855, p. 23.—EDWARDS: *History of the West Indies*.

nels and the cranial junctures in general. Schoepf Merei\* thinks himself justified in assuming that the large fontanel closes later at Manchester, England, than at Pesth, in Hungary. Many similar facts are brought to light by comparative observations. Thus, we are informed by Mauthner,† that the skulls of Slavonian children are more compact, disproportionate, and clumsy, larger in every dimension, and more subject to hyperostosis, than those of Hungarians. And Gratiolet observed, that the cranial sutures close later in the white race than in the black one, and that the coronal suture, being the first to ossify in negroes, is the last to do so in Caucasians.

It is to be considered a law, that the incisors cut, before the closure of the large fontanel takes place, this being followed only by the ability of walking. In the average, the first incisors make their appearance at the age of six or seven months, the large fontanel is closed at twelve, walking ensues at thirteen months. By closure of the large fontanel, however, I do not mean its entire ossification, as this is consummated only with the third year. Some weeks after birth, the large fontanel has a size of a square inch, or nearly so; somewhat less in small and weak children, somewhat more in large and robust ones. From a merely pathological point of view, we take the closure of the fontanel to be complete, when the fibrous bridge between the osseous margins gives way no longer to the pressing finger, and no pulse can be felt through it. The fontanel is seldom closed before the first incisors have broken through; walking is rarely possible before the closure of the fontanel. Sometimes, however, I have seen children walk without a single tooth in their mouth. Merei relates the case of a child who walked at fifteen, had his first incisors at sixteen, and whose large fontanel had the size of about one-half of a square inch at nineteen months of age. Nevertheless, the child was lively, sensitive, not rickety—which seems fully to prove, that irregularities in the development of the osseous system may occur, sometimes, without any morbid symptoms.

The best evidence of a normal development is the regular ap-

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\* A. SCHOEPF MEREI: *On the Disorders of Infantile Development, and Rickets, Preceded by Observations on the Nature, Peculiar Influence and Modifying Agencies of Temperaments.* London, 1855, p. 116.

† *Entwickelungsanomalieen am Kinderschädel.* *Oesterreichische Zeitschrift für Kinderheilkunde*, Nov., 1856, p. 52.

pearance of the teeth. Eichmann\* reports four hundred observations on dentition, from which he draws the following conclusions, The first inferior incisors break through between the 28th and 32d week; the first superior ones, between the 36th and 40th; the first anterior molar teeth, between the 48th and 54th week; the canine teeth, between the 16th and 18th; the first posterior molar teeth, between the 22d and 24th month. At 27 or 30 months there are 20 teeth formed; about this time, or shortly after, the large fontanel has finished its entire and permanent ossification.

Sometimes, however, and indiscriminately so with robust or feeble children, the first incisors cut in the fourth or fifth month. Mercei reports the case of a child which had his first incisor at three months of age, and had fourteen teeth when eleven months old. In newborn children teeth are not frequently found. We are told† that Louis XIV., Richard III., and Mirabeau, were born with teeth; one case is reported by Churchill; in another case: Whitehead,‡ in order to facilitate suckling, removed from the inferior jaw of a newborn child two teeth, which were reproduced simultaneously with the appearance of the canine teeth. One case is reported by Fleming, one by Denman, nineteen by Haller. Nor are remarkable cases of unusually protracted dentition more frequent. Among Eichmann's 400 cases, there are a few, in which the first tooth cut at the twenty-second month; in a case reported by Churchill, it cut in the seventh year; and Mercei knew a child whose large fontanel closed at four years of age, but whose mouth was still toothless at six.§ We have observed, in the "German Dispensary of the City of New York," a child of thirty-four months, without a single tooth, and whose fontanel did not even begin to close. The record of the children's department of the Dispensary contains another similar case of a child two years old. There are, moreover, irregularities sometimes, defying accurate explanation, but worthy of notice. There is, in the written records of the meetings of the Society of German Physicians (Feb. 27th, 1857), the case of a man of 63 years, whose large fontanel was open; also a case of a girl of 14 years, of feeble constitution, with well developed mental faculties, and a large head. Her father has

\* SCHMIDT'S *Jahrbücher der in-und ausländischen gesammten Medicin.* 1853, No. 12.

† FLEETWOOD CHURCHILL. M.D.: *Diseases of Infants and Children.* Second Am. Ed., p. 417.

‡ MERCEI, p. 118.

§ L. C., p. 119.

been syphilitic sometime during his life. Frederick C. Stahl relates the case of a man of 50 years of age, and Eulenberg and Marfels\* report the same anomaly to have occurred in a cretin of 20 years of age.

The following results of Eichmann's seem to be worthy of a particular consideration : Of twenty healthy and robust children, the fontanel was closed in ten at from eleven to thirteen months ; in five at thirteen ; in two at fourteen ; in two at ten ; in one at fifteen. In fourteen of them, the first teeth cut at from six to eight months ; in four at from eight to nine ; in two before the sixth month. Consequently there is, in healthy children, an interval of from four to seven months between the cutting of the first incisors and the closure of the large fontanel.

Of eight feeble or sickly, but not rickety children, the large fontanel was closed in six at from eleven to thirteen ; in two at from thirteen to fourteen months of age. In seven of them the first incisors cut from four to seven months before the closure of the fontanel ; in one the cutting of the first tooth, which took place at thirteen months, was directly succeeded by the closure of the fontanel.

Of eight rickety children, the fontanel in three was closed in the thirteenth month ; symptoms of rachitis developed themselves immediately afterwards. The incisive teeth came at the regular time ; the other ones too late. In three the closure of the fontanel took place between the sixteenth and nineteenth month, the first tooth having cut at twelve months, and being followed by the rest in rapid succession. In one the large fontanel was open at nineteen months ; the first teeth cut at the regular time, but at eighteen months there were only eight of them formed. In one, rickety also before the eleventh month, the fontanel was not closed, and the mouth toothless, at the age of twenty-five months.

A. Schöpf Merei and J. Whitehead have published, in their first report on the Children's Hospital of Manchester, England,† their observations on the closure of the large fontanel, made in children from five months to three years of age. They state at once, that children of one and one-half, two, or three years, in whom the large fontanel was found open, showed a very unfavor-

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\* Hermann Eulenberg und Ferdinand Marfels, Zur pathologischen Anatomie des Cretinismus. Wetzlar, 1857.

† *Journal for Kinderkrankheiten*, 1857. March and April.

able general development; they being very late in teething, feeble as to their locomotory organs, and exhibiting anomalies in the size and shape of cranium and thorax, and symptoms of universal rachitis. Some children who had been walking from their eleventh, twelfth, or thirteenth month, and had some sixteen teeth, had their fontanel open when eighteen months old; in others the reverse took place, the fontanel being closed before the appearance of the very first tooth. Among the whole number of well developed children, observed by our authors, the fontanel was

At the age of 6-7 months closed in 3, open in the rest.

"	8	"	"	8	"	"
"	9	"	"	2	"	"
"	10	"	"	2	"	"
"	11	"	"	4	"	11
"	12	"	"	11	"	3
"	13	"	"	13	"	3
"	14	"	"	13	"	2
"	15	"	"	9	"	0
"	15-18	"	"	each, except 2.		

After the eighteenth month the fontanel was not found open in any well developed child.

Among viciously developed children the fontanel was

At the age of 7 months, closed in 1, open in the rest.

"	11	"	1	"	"
"	12	"	3	"	14
"	13	"	1	"	12
"	14	"	5	"	11
"	15	"	4	"	12
"	16-36	"	13	"	14

In a very small number of children, who exhibited a general state of very bad development and general rachitis, the fontanel was even found open in the third or fourth year of age.

From these facts the conclusion may be safely drawn, that the large fontanel is closed, in well developed children, at or before thirteen months of age, and that it is open at the same period of life, or later, in a large majority of badly developed children. It must not be supposed, however, that the diminution of the size of the fontanel takes place gradually. Schöpf Merei and Whitehead prove by a large number of observations on healthy and

well developed children, that the fontanel is largest at from five to seven months, the size being from one to two inches from one margin to the other ; Liharzik\* arrives at a similar result, and Elsæsser† considers the age of nine months as the period at which the large fontanel ceases growing, and commences its rapid ossification.

The completion of the cranial sutures is often delayed in spite of a normal condition of the brain. Sometimes the ossification in newborn children is deficient ; in such cases it may have started from the usual points, but the bones are thin, their periphery fibrous, or there are fibrous gaps in the osseous structure. Both the circumference of the skull, and the general development of the children, may be entirely normal in such a state of the osseous structure of the cranium. Sometimes, however, abnormalities are found, as, for instance, hydrocephalus. In some cases, the fault has been attributed to constitutional diseases of the parents, to pathologico-anatomical peculiarities of the maternal pelvis. Abnormal sutures also may be found, the ossa frontis, occipitis, temporum, parietalia, remaining each divided as in the foetal state. Or there are the so-called ossa Wormiana, results of normal ossification, but proceeding from an unusual abundance of starting points, in groups of sometimes such a remarkable number, that Meekel met with and counted two hundred of them in one individual.

It is, however, the premature solidity of the cranial bones, which we consider as our special subject in these pages. Sometimes it is inborn, and the result of inflammations suffered during foetal life ; in such cases an osseous elevation is sometimes felt along the sutures. Otto records, in his report‡ on the specimens of the Anatomical Institute of Breslau, the cranium of a newly-born child, with very small eyes, face and orbits were extremely small, the frontal bones firmly joined, formed a prominent edge. Dr. Haase§ met, in a newly-born child, with a piece of bone, entirely filling and covering the large fontanel. Trista|| deliv-

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\* Franz Liharzik, *das Gesetz des menschlichen Wachstums und der unter der Norm zurückgebliebene Brustkorb als die erste und wichtigste Ursache der Rhachitis, Scrophulose und Tuberculose.* Wien. 1858.

† C. L. Elsæsser, *der Weiche Hinterkopf.* Stuttgart und Tübingen. 1843.

‡ 1830. § *Gemeinsame deutsche Zeitschrift für Geburtskunde.* iv. 3.

|| *Rust und Casper Kritisches Repertorium für die gesammte Heilkunde.* xxviii. p. 121.



ered a woman of a feeble and lean child, whose head showed the exact form of a sugar-loaf, the eyes were oblique from upwards and outwards to downwards and inwards, the nose was flat, and had only one aperture; this malformation being accompanied with hare-lip, fissure of the palate, and imperforate anus. In the hospital of Shitomir, Russia, a case of inborn idiotism\* has been observed, in which the cranium was four and one-half inches in length, and three and three-fourth inches in breadth, and was in several places two thirds of an inch thick. Dr. Shnetter, of New York City, has seen three cases of congenital complete ossification of the sutures and fontanels; the heads being hard and well rounded. The delivery was difficult in all of these cases, and the infants did not reach the end of their first year. Another case has been reported by Allen.† All the sutures were ossified, the cranium was like that of an adult, dense and solid, and had to be perforated before it could be born.

The size and symmetry of the skull depend upon both the advancement and seat of the ossification of the sutures, and the adjustment of those parts which are not ossified. For the growth of the flat cranial bones which commences from the sutural substance, ceases mostly after the ossification is consummated. Gibson and Sœmmering were the first to understand the importance of the substance of the sutures, considering it to be the matrix of the growth of cranial bones; but Hyrtl was the first to show that pathological forms of the cranium might depend on the premature closure of single sutures. Fr. C. Stahl‡ considers the ossification of the sutures to be rather the final end of the whole gradual configuration of the cranium and cerebrum. Ludwig Fick§ thinks proper to deny positively any influence of the cranium on the cerebrum.

We have stated, that the growth of the flat cranial bones mostly ceases after ossification of the sutures is consummated. This is an undoubted fact, but is nevertheless not without limitation.

\* *On the state of national health and the efficiency of the civil hospitals in the empire, in the year 1855.* St. Petersburg. 1856. p. 271.

† *New Orleans Medical News and Hospital Gazette*, March, 1857.

‡ *Neue Beiträge zur Physiognomik und pathologischen Anatomie der idiotia endemica.* Erlangen. 1848.—*Damerow's Zeitschrift für Psychiatrie.* 1854. xi. 4.

§ *Ludwig Fick, Neue Untersuchungen über die Ursachen der Knochenformen.* Marburg, 1859.

For it is an old remark of K  lliker's, that after the ossification of the frontal suture in children, the frontal bone always increases in size, particularly between the tubera. And Huschke\* arrived, from very exact and numerous measurements, at this result, that the cranium is increasing in size up to the sixtieth year, a period when the sutures are perfectly closed. The cause of this general result is found in the fact, that the osseous substance is re  sorbed from the interior, but reproduced from the exterior periosteum. Nevertheless, it may be stated as a rule, that generally after the ossification of the sutures and fontanels is complete, the brain cannot increase its volume except by forcing asunder the sutures, or by re  sorption of the inside of the cranium.

The variety of forms of the cranium produced by the earlier or later, partial or total synostosis of all or some of the sutures, is very large. For discerning these various forms, R. Virchow† has successfully adopted a terminology, similar to the one used by Retzius, for discriminating the varieties of races by their skulls, which we reproduce, although being well aware of partial objections made to it.‡

1. Macrocephali, large heads ; general circumference of the head too large. Hydrocephali, waterheads.
2. Microcephali, small heads ; general circumference of the head too small. Nanocephali, dwarfheads.
3. Dolichocephali, longheads.
  - a. Simple dolichocephali ; synostosis of the sagittal suture.
  - b. Leptocephali, narrow heads ; lateral synostosis of the frontal and parietal bones.
  - c. Sphenocephali, cuneated heads ; synostosis of the parietal bones, with elevation of the region of the large fontanel.
  - d. Clincephali, saddleheads ; synostosis of the parietal and sphenoid bones.
4. Brachycephali, shortheads.
  - a. Simple brachycephali, bigheads ; synostosis of the parietal bones with the occipital bone.
  - b. Plagiocephali, oblique heads ; synostosis of the frontal with one parietal bone. Where a considerable adjustment takes place : Platycephali, flatheads.
  - c. Oxycephali, pointed heads, sugarloaf heads ; synostosis of the lambdoid and squamous sutures.

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\* *Emil Huschke, Sch  del, Hirn und Seele des Menschen und der Thiere, nach Alter, Geschlecht und Race. Jena, 1854.*

† *Verhandlungen der physikalisch-medicinischen Gesellschaft zu W  rzburg, 1851, vol. ii. 230.—1852, vol. iii. 247.—1856, vol. vii. 199.—R. VIRCHOW: Gesammelte Abhandlungen zur wissenschaftlichen Medicin. Frankfurt, 1856, p. 891.*

‡ *J. Christ. Gustav Lucae, zur Architectur des Menschensch  dels, nebst geometrischen Originalzeichnungen von Sch  deln normaler und abnormer Form. Frankfurt, 1857.*

We have found that ossification of the sutures leads not only to asymmetry of the cranium, but to the gradual cessation of the growth of the cranial bones. The cerebral functions depend to a great extent upon the size and symmetry of the cranium; in cases of considerable diminution and asymmetry, we are almost certain to find that not only the intellectual faculties, but also those of locomotion and sensibility are injured. Convulsions, deafness and dumbness, failing of the sexual instinct are known to be frequent consequences of an early and extensive synostosis of the sutures. Where it is limited to one side or locality, an adjustment is possible in the direction of the yielding, unossified parts; in such cases the cerebral functions may be nearly or wholly normal. Other less favorable cases look like the one of osteosclerosis cranii, not long ago reported by Schützenberger.\* The disease lasted about four years, before the continually increasing compression of the hard, compact, and eburneated cranium, succeeded in effecting the death of the patient, who had endured all his life frequently repeated faintings, a long series of epileptic and tetanic attacks, abnormal irritability, mental weakness, and, at last, idioey.

With the only exception of the macrocephalic—hydrocephalic—form of the cranium, there is none which has been studied with so much eagerness and success, as the microcephalic one, particularly in its relation to the diminution of mental faculties. Bail-largert† saw, in a village of southern Switzerland, three microcephalic idiots whom their mother reported to have been born with their skulls perfectly closed and solid. Two other children of hers, who were well developed, both bodily and mentally, had their large fontanel open for a long while after birth. Similar facts he learned from another woman, who was mother of one microcephalic idiot, and of some other children of normal development. Furthermore, he describes the cranium, in his possession, of an idiotical child, 4 years old. Its dimensions are very small indeed, the largest circumference not being thirty-five centimeters. The coronal suture had disappeared entirely; no less so an osseous prominence. Only the lambdoid suture was slightly discernible.

Similar cases have been observed by others. Vrolik,‡ of Am-

\* *Archives, générales*, 1856. No. 8.

† *Gazette des hôpitaux*, 1856. No. 91.—*Bull. de l'Acad. XXI.* p. 950. 954. 1856.

‡ *Verhandelingen der K. Akad. der Wetenschappen, I. Deel. Amsterdam*, 1854. *Schmidt's Jahrb.*, 85. 3.

sterdam, knew an idiotical boy of 7 years, whose cranial sutures had entirely disappeared.

The skull was asymmetrical, the face appearing as it were to be bent from the left to the right side, the occipital portion from the right to the left. On the left side the fossa cerebelli was larger, the cavity of the hemisphere of the cerebrum smaller; the bones were also thicker on the left side of the cranium, than on the right. The frontal bone was flat, the frontal tubera very little prominent; the parietal bones high but short; on the left parietal bone, and on some other parts local rarefaction of osseous substance; the occipital bone oblique and flat. There were no digitated impressions on the inside of the cranium, all the sutures almost completely closed. With the exception only of the mastoid foramina, the apertures of the emissaria Santorini were very narrow, but the carotid canal was wide. The ethmoid bone was narrow, no juncture visible between the anterior and middle clinoid processes. The oval, anterior condyloid, and auditory foramina were very large, the round one small. Upper jaw, nasal and jugular bones were remarkably developed. The hemispheres of the cerebrum were so much shortened, as to leave the cerebellum partly uncovered; gyri few and incomplete, sulci flat, olfactory nerves thin. In the cerebrum the right hemisphere, in the cerebellum the left one, was largest. Pons Varolii was narrow, the oblongated spine disproportionately thick. The lateral ventricles were expanded by serum to such a degree as to leave between the ventricle and the coronal suture, only a thin transparent pellicle of what was formerly normal cerebral substance. Corpus striatum and thalamus were abnormally flat.

Cruveilhier reports the case of a child 18 months old, without any discernible sutures. There was, besides, instead of the normal external occipital protuberance and the semicircular line, a transverse, very sharp osseous prominence. The vertical diameter of the cranium was as short as one inch. There had never been even a vestige of intellectual faculties.

After all, premature cranial ossification, although there may be many other causes of idiocy, is deserving of every consideration.

The normal human brain differs from the animal not only in its relative volume, but also in its growth. Besides, the fontanel of the human cranium is not found in animals, with the exception only of a few varieties of apes, who have, for a short time after

birth, small and rapidly ossifying fontanels. Therefore Baillarger, taking into consideration both the growth of the brain, and the premature ossification of the cranial sutures, thinks himself justified in comparing microcephalic idiots to animals. Gratiolet did not even stop here, but asserted, in the meeting on August 25th, 1856, of the Paris "*Académie des Sciences*," that there is a direct relation between the earlier or later ossification of the sutures, in the different races and types of mankind, and the height of their intellectual faculties. He states, as we have mentioned above, that the cranial sutures close later in Caucasians than in Negroes, and particularly, that the coronal suture ossifies early in Negroes, late in Caucasians. For this reason a proportionally late ossification of the coronal suture seems to be favorable to intellectual development. The high forehead also, of the Caucasian, and the low one of the Negro race are evidently depending on this physiological fact, although it may be stated that the synostosis of the sutures is not the only cause of cranial difference in the races, the various characters of the crania, as they are found in different races, being partially formed before synostosis of the sutures is complete.\*

A frequent result of cranial premature synostosis appears to be deafness and dumbness (two such cases have been reported by Virchow) and cretinism.

Eulenberg and Marfels made a post-mortem examination in a case of cretinism. The cranium and brain were asymmetrical, gyri of the left side broader, straighter, more simply formed. Even more difference was shown in the chiasma, which was one-twelfth of an inch broader on the right side; nerv. opt. and corp. striat. more developed on the right side; the cortical substance remarkably thin in proportion to the medullary substance. The right side of the cerebellum was softer and smaller than the left. There was a far-spread hyperæmia around the spheno-basilar synostosis which was present in this case; and which, for this reason, is considered by the reporters as the result of an inflammatory process, the origin of which is to be traced back to foetal life.

Even more frequently than the above-mentioned abnormities has

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\* E. Huschke, *über cranio-sclerosis totalis rhachitica und verdickte Schädel überhaupt, nebst neuen Beobachtungen jener Krankheit.* Jena, 1858.

epilepsy been observed to be a frequent consequence of precociousness of cranial synostosis. In a great number of epileptics the form of the cranium is anomalous; thus Rieken already noticed, in a man suffering from epilepsy, a lower situation, larger size, and malformation of all the parts of the right half of the head.\* In proportionally few cases it is too large, hydrocephalic; in most of them it is too small, and spherical or pointed. The most important characteristic, however, is asymmetry, the head appearing, as it were, compressed from a lateral, anterior or posterior direction. Among forty-three epileptics, recorded by Müller, of Pforzheim,† the heads of thirty-nine were asymmetrical; in the majority of them there was, besides, hyperostosis of the cranium. The older a case of epilepsy, especially if it dates from the first years of life, the more the cranium will be dense and eburneated. Epilepsy originating at this early age, is considered to be the most critical and incurable, leads often to, or is complicated with idiocy, and shortens the duration of life.‡ We have been informed by Dr. Schilling, of this city, of the case of a girl eight years old, who has been suffering for some years past from epilepsy, which, led by anamnestical facts, he does not hesitate to trace back to premature synostosis of the cranial junctures; we have ourselves been attending for four or five months a girl of fifteen years, whose menses were regular and pretty copious, who, has been suffering since her second year, once, twice, or three times every day of her life from epileptic fits, which we can, by every possible evidence, attribute to the same cause.

Epilepsy is rare in new-born children—frequent after the first dentition. Hyperostosis of the cranium, particularly in cases dating from early childhood, seems also to prove, that too rapid and abundant ossification of the cranial bones, before the brain has obtained a sufficient growth, and the compression of the brain produced thereby, are among the causes of epilepsy. Every case of this kind is illustrated by Travers,§ who reports the case of an epileptic boy suffering from compression of the brain, which was

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\* v. Gräfe's und v. Walther's *Archiv für Chirurgie und Augenheilkunde*. XVII. 2.

† R. VIRCHOW: *Handbuch der speciellen Pathologie und Therapie*, vol. iv. i. 268.

‡ ROMBERG: *Lehrbuch der Nervenkrankheiten*, p. 697.

§ B. TRAVERS: *A further Enquiry concerning Constitutional Irritation and the Pathology of the Nervous System*, p. 285.

caused by a particle of the fractured cranium. There was no other fit, after the fractured bone had been removed.

According to Chazeauvicilh,\* of sixty-six cases of epilepsy, eighteen occurred in the first lustrum, eleven in the second, eleven in the third, ten in the fourth, five in the fifth, four in the sixth, one in the seventh, two in the eighth, one in the ninth, two in the tenth, one in the twelfth: that is to say, more than twenty-seven per cent. occur under the first five years, and probably even between the second and fifth year of life. This is just the period of infantile development, in which irregular ossification may begin to prove dangerous. For, as Romberg emphatically asserts, the orgasm of the brain, inclosed as it is in unyielding osseous walls, cannot but favor the transmission of remote irritations to the corpora quadrigemina and the oblongated spine, and thereby produce irregular reflected motions. On this principle, convulsions are the habitual consequences of cerebral hypertrophy, which is frequently combined, too, with hypertrophy of the cranium.

Every symptom in all the objects of the foregoing exposition can be explained, as it were, by a relative hypertrophy of the brain; that is to say, by a disproportion between the closed and narrow skull and the inclosed and growing brain. Such, however, is the similarity between the symptoms of some of the most different cerebral diseases, that a distinct diagnosis of the pathologico-anatomical alterations is not always easy, sometimes very difficult. Lænnec,† in referring to Jadelot's remarks on the disproportion between skull and brain, has already acknowledged, that he sometimes made serious mistakes in the diagnosis of hydrocephalus internus. He confesses that in a number of cases he met with no water at all, but only with a remarkable flattening of the gyri, which seems fully to prove that the brain was compressed, by its volume being too large and its growth too active; and next, with an extraordinary firmness and elasticity of the cerebral substance. Next to Lænnec, in 1824, Hufeland communicated to the profession his observations on cerebral hypertrophy, which he, too, declared to have been often confounded with hydrocephalus internus. It was he who established a new

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\* *De l'Épilepsie considérée dans ses Rapports avec l'Aliénation Mentale.* Arch. Génér., 1825, p. 73.

† *Journal de Médecine, Chirurgie et Pharmacie*, 1806, vol. xi., p. 669. *Revue Médicale*, 1828, observations pour servir l'histoire de l'hypertrophie du cerveau.

fact met with in every such case, viz., the *cerebral hernia* ; that is to say, he showed, that in every post-mortem examination in these cases, the compressed, elastic brain springs forth through the incisions made into the membranes. He is, however, always speaking of an abnormally *large brain within a normal skull, of real cerebral hypertrophy* ; and identical with his cases, are those reported by Scoutetten, Meriadec, Lænnec, Burnet, Papavoine, Cathcart Lees, and Barthez and Rilliet.

Some years ago, we had occasion to observe three unmistakable cases, the reverse of those treated of above—that is, *cases of an originally normal brain in an abnormal cranium*, this having remained *too narrow in consequence of premature synostosis of the fontanel and sutures*. This narrowness, however, was the only anomaly ; for the process of ossification would not have been irregular at all, if it had ended some months later ; there was no constitutional disease of any kind, not even a sign of hyperostosis, or of preceding inflammation. The three patients, who came under my observation in August, 1851, in the fall of 1855, and in August, 1856, were children—two ten, and one eleven months of age ; the first one a male, the other two females. All of them were *well developed, had been robust and apparently always healthy*. The third one was said to have, in the last months preceding her death, from time to time, cried vehemently and suddenly, without any manifest cause. In neither of these cases was it possible to perceive weakness of intellect, apathy, somnolence, and feebleness of the extremities, all of which symptoms Cathcart Lees considers as indispensable signs of genuine hypertrophy of the brain. In the first case, it was stated that the child lost his habitual brightness and liveliness about a fortnight before the symptoms became severe ; in the other cases, this failing could be observed but a day or two before symptoms of depression of the brain were visible. The children grew sleepy, almost soporous, the pupils enlarged ; vomiting soon followed. From time to time, they exhibited, especially the third patient, light intermediate signs of irritation. Contractions of the extremities came next, and, in short, all the graver signs of depression of the brain. The soporosity increased so as to become complete unconsciousness, every sensual function being totally paralyzed ; and, at last, death ensued with clonic convulsions.

The picture we have given of this disease is the almost exact



likeness of the *last stage of the inflammatory and exudatory diseases of the brain and its membranes in general*. Its distinct diagnosis is, therefore, sometimes impossible, and always difficult. The present state alone of a patient, who lies prostrate, with all the symptoms of depressed brain, will not enable a medical man to get a clue to what has preceded. Sometimes he will obtain anamnestical facts, the best of which is, at all events, *the knowledge of the condition of the large fontanel and cranial junctures*. In this manner, we were enabled to make an exact diagnosis in the cases of our last two patients. We found that in the children, ten and eleven months old, the large fontanel was entirely closed, and no pulse could be felt through it. In the last case, the parents, without any suggestive questions of ours, and only induced to do so by our examination of the fontanel, told us, that the fontanel of another child of theirs, who had died two years before, at the same age, and under the same symptoms, was also closed long before death.

In the first and third cases we were allowed to make a post-mortem examination. The result was alike in both of them. There was nowhere a pathological alteration to be found, except the *abnormal solidity of the cranium* and the following state: The cavity of the cranium was completely and compactly filled up by the brain; the membranes were pale. *No signs of inflammation or only hyperæmia*. The sinus narrow; *gyri flattened*; the substance of the brain *dense, elastic, difficult to cut*; of an apparently considerable specific weight. The gray substance was whitish; fluid in the ventricles not remarkable in quantity. There was *no disproportion* between the different parts of the brain, a symptom, which never fails in genuine cases of cerebral hypertrophy; this being but an increase of the white substance, while the grey one remains unaltered, and affecting neither the middle part of the brain nor the cerebellum, while the pressure of the unyielding cranium, when no adjustment has taken place, will sometimes, but not always, operate in every direction, and affect every part of the brain, which may be sound in every other respect.

The abnormal state of the cranium and the brain which we treat of, is almost overlooked by the best authors on diseases of children, Rilliet and Barthez. There is only a short notice in their book relating to premature closure of the cranium as being a cause of induration of the brain, and they seem to be so little aware of the intrinsic difference between induration of the brain and its

hypertrophy, that they treat of both of them in the same short chapter (the fifth of their first volume). So does Churchill, l. c. p. 178. Even Förster,\* one of the most excellent authors on pathological anatomy, scarcely mentions our subject, so that in treating of "induration of the brain," he says: "Increased consistency of the whole brain, or total sclerosis, is a normal occurrence in old age, and of the same frequency, but less importance, in intoxication by lead, in typhus, cholera, puerperal peritonitis, scarlatina. Only in intoxication by lead, where induration is combined with atrophy, it reaches such a height as to affect seriously the cerebral functions. In other cases, the increased consistency of the cerebral substance is of some interest only when found in post-mortem examinations, and is usually produced by copious exudations, leaving the brain deprived of its parenchymatous serum. High degrees of total sclerosis are met with only in atrophy of the brain.

Cases of sclerosis of the brain are met with, sometimes, in reports on post-mortem examinations; cases, too, of premature closure of the cranial junctures have been communicated to the profession, but in very few of them has an attempt been made to elucidate the evident relation between these two anomalies.

F. Weber† reports a case of sclerosis of a part of the cerebrum, which we are hardly entitled to consider as belonging to the class of cases forming the subject of our treatise. The author is not aware of the importance of the early or late closure of the cranial junctures, but thinks it a remarkable fact, that sometimes small, puny children, with small heads, exhibit cranial bones reaching a high degree of osseous development, while in other cases, in large, strongly built children the cranial bones were thin and easily cut with a pair of scissors. Thus, in the report of a post-mortem examination of a child, who died at the age of seven months, after having suffered from convulsions for half a year, he entirely omits to state the condition of the fontanel or cranial sutures. The case was that of sclerosis of the right hemisphere, which felt to the knife-like cartilage; particularly its gray substance was dense and hard even where the white substance showed the average soft-

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\* A. FÖRSTER, *Handbuch der pathologischen Anatomie*, ii. p. 427.

† F. WEBER, *Beitraege Zur Pathologischen Anatomie der Neugeborenen*, Kiel, 1851, i. p. 31.  
46.

ness of a normal cerebrum. Nor was the structure of the parietal bones like that usually found where premature ossification of the sutures has taken place; the bones showing rather a soft hyperæmic thickening than a solid hyperostotic condition.

Of more value for our purpose is the case of "sclerosis cerebri" reported by Stiebel, Jun.\* It is the case of a girl, paralyzed in her left side after a severe attack of convulsions occurring in her third year. About that time the general health of the child does not seem to have been influenced by the disease, which made progress during the next half-year to such an extent, that the left half of the body being paralyzed, the right was affected with clonical spasms, and psychical action considerably diminished. At the same time contractures were observed on the side affected with spasms; but notwithstanding all this, the bodily development, the embonpoint, had not been affected. No sooner than a year afterwards, the child was emaciated, the other symptoms remaining the same throughout the whole time, until the child died at the age of more than five years. The post-mortem examination of the cranium and cerebrum gave the following results: The skull was very thick, from one-sixth to one-third of an inch, like that of adults; the dura matter thickened to at least as much as twice its normal size, firmly adhering to the skull, and, on the right side, to the brain. The bloodvessels of the arachnoid membrane were much injected with blood, and there was a jelly-like exudation all over the surface of the cerebrum. The left hemisphere was of normal consistency and pretty well filled with blood; its gray and white substances were very distinctly separated from each other. The left ventricle contained a large amount of serum, foramen Monroi was dilated. The right ventricle was somewhat enlarged; its walls were normal. The right cerebrum, with the exception of the anterior lobe, and the inner part of the middle lobe, was unaltered in its shape, but of a dense, hard, and nearly cartilaginous consistency; it was of a whitish yellow color and could be cut into very thin, blueish, transparent slices. The microscopical examination exhibited a proportionately small number of cerebral ganglia, very few varicose cerebral fibres, but a large number of amorphous masses interspersed with some fat globules. In the gray substance the capillary system was developed to an unusual extent.

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\* *Journal für Kinderkrankheiten*, 1857, Jan. and Feb., p. 76.

W. HUGHES WILLSHIRE\* reports the case of a sickly, puny scrofulous girl, of a year and five months, who was said to have fallen sometime ago and hurt her head. The fontanelles were closed, the eyes squinting, and the tarsal margins somewhat inflamed. The child could not lift her head, the dorsal muscles appeared to be somewhat opisthotonic, and the upper part of the body was drawn backwards. Such was the state from the 17th of January to the 27th of February, when the child fell sick with variola; convulsions, stupor, and pulmonary oedema soon ensued, and a speedy death followed. The post-mortem examination gave the following results: Cranium was completely ossified, dura mater firmly adhering to the bones, the gyri were narrow, pressed into each other, sulci partly obliterated. The meningeal bloodvessels were overfull of blood, on some spots there was some milky exudation along the course of the vessels. Brain was solid to the touch; it was hard and heavy after being taken from the skull; when incised, it appeared condensed, compressed; most so the white substance. Most solid were the thalami optici, much less so the cerebellum. In the ventricles there was some serum, and a little exudation on the basis.

One very good observation was published, some time ago, by Prof. Mauthner, of Vienna.†

**Case.**—Mary F., 3½ years old, is said to have suffered, 1½ years ago, from convulsions caused by a fall on the occiput. She has been sickly ever since. When taken to the hospital, she exhibited the following state and symptoms: The child is emaciated, feeble; hair of a light brown color, cranium remarkably small and hard, particularly so in the occipital region; the countenance has a suffering expression; lips and tongue are red. The child sucks her thumb continually. The abdomen is concave; the lower extremities are drawn to the abdomen; pulse thin and much accelerated; sleep restless. Evacuations dry, rare.

**Treatment.**—Four leeches on the mastoid region. Carb. Magn. to facilitate defecation.

Two days later, June 11th.—The child moans frequently; sleeps very little. No evacuation. Sulph. magn. ʒi., aq. ʒiii.

The following day one evacuation. Constipation again to the

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\* *London Lancet*, Oct., 1853.

† *Oesterreichische Zeitschrift für Kinderheilkunde*, Sept., 1857, p. 561, *sclerosis cerebri ex microcephalia*.

16th, when jalap 3ss. was required to open the bowels. No change in the other symptoms, only the emaciation and feebleness of the patient are increasing. Three convulsive attacks, of only two or three minutes each, occurred during the night.

July 2d.—The child continues to moan and whine. Hands cyanotic; abdomen hard, somewhat inflated; skin dry. One convulsive attack in the morning. Sucks her thumb. Constipation of the bowels. Carb. magn. gr. x., aq. ʒii.

July 5th.—The child is very low; has fallen off considerably.

July 14th.—Since yesterday ten thin, greenish-yellow passages, mixed with mucus. Hands cold. Dec. salep ʒii., pulv. r. ip. gr. x., syr. simpl. ʒii.

July 18th.—Collapse increasing. Diarrhoea but little better. Pulv. Dov.

The child grew worse from day to day, emaciation going on in rapid progression; appetite lost; eyes hollow; face and extremities cyanotic; temperature of the skin low; passages not so numerous, but thin and mucus. After some days of constant sopor, the patient died on the 25th of July.

*Post-mortem examination.*—The corpse is very much emaciated; abdomen discolored, greenish, concave; the extremities are flexible. The cranium is of unusual compactness and smallness. The integuments being removed, the distance from the root of the nose to the external occipital protuberance is twenty-two centimetres, from one ear to the other  $23\frac{1}{2}$ . The circumference of the cranium is forty-two centimetres. While the cranium is getting opened, a great deal of serum is escaping. *The membrane is thick, adheres firmly to the cranium, and can only with some difficulty be removed. The fontanels have disappeared entirely, the sutures are found to have been ossified long ago.* The left hemisphere is of very small size; its gyri are hard, of a dirty yellow color, showing signs of atrophy. Between the layers of the pia mater are four ounces of a thin dark serum, mixed with blood. The pia mater of the right hemisphere is slightly injected with blood. The cerebral substance is pretty dense. The right lateral ventricle is not dilated. All the nerves originating in the brain are of a considerable toughness, as well as the flattened gyri; pons and cerebellum are normal; medulla oblongata very hard; some fibrine coagulated in the longitudinal sinus. The cranium is as thick as one centimetre about the squa-

mous part of the temporal bone. Its longitudinal diameter is 15 centimetres; the transversal  $11\frac{1}{2}$ .

A very interesting and instructive case, which has been our fortune to meet with, is the following:

George Z., of Forsyth street, eleven months old, a robust child, was not known to have ever been sick. He became restless and feverish on the first of November, 1857, with augmented temperature of the head and slight vomiting. His parents, believing him to suffer from "dyspepsia," administered an emetic. On the following day he spontaneously vomited twice, the general state remaining as above-mentioned. Bowels open and water passed freely. We were requested to see the patient at seven o'clock, P. M.

*Present state.*—Slight clonic convulsions of the muscles of the face and superior extremities; forty breathings in a minute, pretty regular; pulse contracted, 140; pupils somewhat dilated, react on the influence of sudden light, but are floating for a while afterward and dilate again; conjunctiva scleroticæ slightly injected with blood; occiput abnormally warm; hands and feet of normal temperature. The child in general was well developed, the head somewhat large; six teeth cut some months ago; the gum is swollen. The sutures and the large fontanel perfectly closed, and have been so, as far as I could learn from the very intelligent relatives, for at least three months.

*Diagnosis.*—Cerebral sclerosis from mechanical compression of the brain, caused by premature closure of the cranial junctures, increased by cerebral hyperæmia consequent on dentition.

*Prognosis.*—Probably fatal; the patient may recover from this attack, but only to die by a future one, or at best will become idiotic.

*Treatment.*—Calom., jalap. aa. gr. j., to be taken every hour; head to be kept under ice.

The convulsive attack lasted for three hours, the muscles of the inferior extremities becoming also affected; there was only one short intermission after copious vomiting. Patient vomited once more at eleven o'clock, P. M. At midnight, fifty-two breathings in a minute, somewhat irregular; pulse as before, 172. Temperature of the occiput even higher than before; conjunctiva scleroticæ more injected. The child no longer fully unconscious.

Nov. 3d,  $8\frac{1}{2}$  o'clock, A. M.—Pulse contracted, somewhat irregu-

lar, 144 ; fifty breathings, interrupted by sighing. The child is prostrate, spiritless, with an expression of pain about the corrugatores of the eyebrows. The right eye more injected than the left one ; no more convulsions ; bowels have been open three times ; water has been passed several times. Patient vomited once, not long after midnight ; has taken the breast four times, and is constantly looking around for water.

Four o'clock, P. M.—Took the breast and drank several times ; vomited four times ; left hand is constantly kept on the parietal bone ; pulse as before, 144 ; respiration sometimes sighing, thirty-eight ; eyes hollow, considerably injected with blood ; occiput abnormally warm ; feet cool, hands cold.

Treatment the same. Hot poultices of mustard and linseed on feet and legs.

Ten o'clock, P. M.—Vomited twice, each time after drinking ; took the breast several times ; had no convulsions, but shook his limbs under the bed-clothes, from time to time, as if from impatience. Respiration, as above, 35 ; pulse, 130, somewhat irregular ; body warm all over, with the exception of the nose, which was cool. Feels every slight touch ; screams abruptly and violently when his eyes are forced open. During sleep, the eyelids half opened ; pupils small. After being awakened from his heavy sleep, his pupils are a little dilated ; contract by the action of light, but afterwards float, and dilate again.

*Treatment.*—Calom. gr. j., extr. hyosc. gr.  $\frac{1}{8}$  every hour. Ice continued.

Nov. 4th, half-past eight o'clock, A. M.—Pulse and respiration as yesterday : 144, 54. No change at all, with the exception of the patient's vomiting no longer ; he is alternately either awake or unconscious, or in a kind of heavy sleep ; had two evacuations of the bowels, passed water freely. Feet cool.

Six o'clock, P. M.—No change ; no convulsions ; no vomiting.

Nitri. Sod. ʒij. extr. hyosc. gr. iiss. inf. digit. (e gr. xij.) ʒiij. a teaspoonful to be taken every two hours. Ungt. hydrarg. for external use.

The flexions and extensions of the right superior extremity kept on and increased, the child grew more restless, threw his head from one side to the other, respired more frequently and irregularly. Nevertheless, about one o'clock, A. M., he took the breast, but

only for a minute. The increased irritation was soon followed by unconsciousness and sopor, which lasted for about an hour. With the usual symptoms, œdematous rhonchi, etc., death ensued at half-past two o'clock, A. M., November 6.

*Post-mortem examination*, four o'clock, P. M., thirteen and a half hours after death. Front side of the corpse pale, back side red and brown, by hypostasis; conjunctiva scleroticæ not injected with blood. Galea aponeurotica pale throughout, except on the occiput, where it was suffused with blood, more so than could be explained by hypostasis alone. All the integuments being removed, about *fifteen white and unusually dense insular spots*, of a diameter of from a twelfth to three-quarters of an inch, become visible on the frontal and parietal bones. Cranium not abnormally thick, occipital bone even rather thin; besides, it is hyperæmic, and shows on its inside *digitated impressions* of such an extent as are met with only in adults. The insular spots, being *the places of increased local ossification*, are just as manifest inside as outside. Of the *frontal suture there is no sign*. Between the frontal and the parietal bones, there is no interval, the *large fontanel having totally disappeared*. Where the large fontanel ought to be, the coronal and sagittal sutures are not wholly ossified, but they cannot be disjointed by any means. Ossification is perfect everywhere else.

The dura mater *cannot be torn from the cranium*; the membrane is of such a thickness and adheres so firmly to the cranium, that it has to be separated from the bone by means of the scalpel. The sinuses are full of blood; so are all the blood-vessels of the pia-mater, particularly on the cerebellum; nowhere extravasated blood or any pathologico-anatomical alteration, such as tubercles, exudations, etc.

The brain *large, heavy, solid*, proportionally developed in its several parts; *gyri* numerous and *solid*, some of them evidently *flat*, particularly so on the superior surface of the hemispheres. The gray substance is less hard than the white, but nevertheless is tough and elastic. This is found to be throughout the condition of the cerebral substance. When it is laid open by long incisions, no blood is seen, except on pressure. *Ventricles narrow*, contain no serum. *Pons Varolii* and *medulla oblongata* are most solid and dense; they are difficult to cut. The cerebral substance, after



having been outside the cranium and handled and turned for at least an hour, remains pretty hard and solid.

Although the diagnosis, in the foregoing case, was clear and fully proved to be correct by the post-mortem examination, there are some interesting facts apparently contradictory. After the first attack of convulsions, no other occurred for three days, almost up to the hour of death; constipation and anuria, so common in cerebral diseases, were also absent.

Between our last case and the one of Prof. Mauthner, there is one important similarity. The thickness and firm adhesion of the dura mater along the sutures and in the region of the large fontanel, in both cases, seem to prove, that a *chronic congestive or inflammatory process* was both the cause of the pathological alteration of the membrane itself, and of the abnormal deposition of phosphates and carbonates in the flat cranial bones. No such alteration of the membrane was found in our former post-mortem examinations, at least to no remarkable degree. This difference is strikingly confirmed by the condition of the bloodvessels. In some cases, they *were filled with blood, in other ones the membranes were pale and bloodless.*

In looking over the series of cases and observations referred to, another highly interesting fact will strike us. We have reported the case of a child whose brother died at the same age, with the same symptoms, the fontanel being closed and the sutures perfect. Baillarger, too, reports the cases of three microcephalic idiots in one family. Nothing of the kind however, occurred in our last case; the boy had sisters—the oldest one nine, the youngest one three years old—the heads of all of whom are well developed, and even large. The youngest girl is reported to have been remarkable for the pulsations of the arteries being for a long period visible through the integuments of the large fontanel. Therefore, *in some cases of premature closure of the fontanel and the cranial junctures, an hereditary or family influence seems to be absent, while in other ones it cannot be denied.*

We were so fortunate as to assist Dr. J. Kammerer at the post-mortem examination of a man, thirty-six years old, who died from *sclerosis cerebri*. The facts resulting from this examination, Dr. Kammerer, who attended the deceased for some years, kindly allowed us to publish. We feel bound to do so, because this case is most apt to illustrate the subject of this essay, and because, as one

of our best authorities on diseases of the brain, Prof. Leubuscher, asserts cases of genuine sclerosis cerebri are exceedingly rare ; so much so, that the two cases diagnosed, dissected, and published by Prof. Frerichs,\* of Breslau, and the twelve other cases of sclerosis of the brain or spine, they being cases only of partial, even merely local sclerosis, collected by Dr. Valentiner,† are the largest number known. It may be stated, that only in one of the 12 cases which occurred in a man of 53 years of age, the cranial bones were found to be hypertrophied, and the meninges hyperæmic and somewhat infiltrated. In this single case both halves were equally affected.‡ The short, but complete history of the case, communicated to us by Dr. Kammerer, is as follows :

**Case.**—Deceased, a tailor, is said to have been always healthy. Only two years ago his countenance began to show a cachectic color ; in the epigastrie region, a frequent soreness was complained of, which used to be complicated with or followed by vomiting, and the patient grew morose, taciturn, peevish. About the same time, or shortly after, a creeping pain was felt, sometimes in the hands and fingers, sometimes in the feet and toes, which changed very often, and used to alternate, as to its seat, and thereby induced the patient to consider it as rheumatic. His physician, however, was soon led to attribute these symptoms in the periphèric nerves to a cerebral origin, especially when slight and occasional signs of paresis became visible. Four or five months ago, the patient had an attack of syncope, total loss of the mental, sensory, and motory functions coming on suddenly. After this attack, he was sick for about five or six weeks, the main symptoms being a small and feverish pulse, and all the cerebral symptoms of typhoid fever, but no typhous alterations at all in the abdominal organs, and no trace of critical secretions. He never felt well afterwards ; nearly every week an attack of sudden syncope occurred, similar to the one mentioned above, after which the patient used to feel as usual. But the parietic symptoms in the extremities increased, the interval between the attacks grew shorter, and they were preceded by a violent headache, especially in the occiput. In the last weeks preceeding death the attacks occurred almost daily, even sometimes every day, and they were preceded by the

\* *Hæser's Archiv.* x. 334. † *Deutsche Klinik*, 1856, No. 14, 15, 16.

‡ *Hirsch, ein Fall von sclerosis cerebri.* *Prager Vierteljahrschrift*, 1855. .iii. 124.

most intolerable headache, which forced the patient to the most heartrending outcries, and was mitigated by nothing except a close and hard pressure on all sides of the head at once; they were followed by copious sweats. In the last week of life, the patient was scarcely able to lie down; if he did he was sure to feel worse; and he walked about his room all night. There were from eight to twelve attacks every day, of the same kind, as described above, the sweat being followed by a vehement shaking and chilliness. In one of these attacks the patient died.

*Post-mortem Examination*, Dec. 9th, seventeen hours after death. Galea aponeurotica pale, bloodless; cranium dense, particularly so the frontal and parietal bones. Both of them are very concave, extending very far, the one forwards, the other backwards. The region of the large fontanel, where the coronal and sagittal sutures meet, depressed; the sutures are visible only at this meeting point; everywhere else they have entirely disappeared. The form of the cranium narrow and long (dolichocephalus, Virchow), diploe very much developed, *impressiones digitatæ* very deep and large, particularly so on the inside of the os frontis and the lower part of the os occipitis. The cranial impressions of the sinus, sulci venosi, uncommonly deep. Foramina emisaria are not found at all. The margins of the impressiones digitatæ, the juga cerebrialia, uncommonly sharp-pointed, particularly so on the basis cranii. Sella turcica of an extraordinary size, and with sharp margins. The whole inside of the cranium and the dura mater bloodless; less so the arachnoidea, without being, however, hyperæmic. The brain stiff, tough, hard; gyri hard, extremely flat all over the cerebral surface; the inner and upper edge of both hemispheres very sharp, their inner surface very flat and hard. The gray and white substances contain very little blood. The white substance looks discolored, showing a dirty grayish tint. Thin slices cut from the hemispheres are tough, may be suspended by one end without breaking or even lengthening; the commissures prove hard and tough. The lateral ventricles very narrow, without any serum; the third and fourth ventricles normal but narrow. The brain throughout of the same density and toughness as its surface; pons Varolii and medulla oblongata even more so. No disproportion, as to size, between the gray and white substances.

This is, undoubtedly, an evident and very instructive case of *sclerosis cerebri*. The history of the deceased's cranium and cerebrum, as may be concluded from the results of this post-mortem examination, is briefly this: The abnormal state of the cranium has been the first false step in the general development, the large fontanel and the cranial junctures closing too early. This is proved to be a fact by the depression of the upper frontal and parietal region, by the adjustment which has evidently taken place in the frontal and occipital directions, and by the dolichocephalic shape of the cranium. From this time, that is from the third or fourth quarter of the first year of life, dates the disproportion between skull and brain. It is probable that deceased, when a child, was so fortunate as to escape difficult dentition, and severe symptoms of irritation produced thereby; if he had not been so, there is a great probability that he would have died in early childhood. Deceased is said to have been intelligent when attending school. This is not uncommon in cases where the above-mentioned disproportion advances slowly, and has not been complicated with irritative symptoms. As long as life continued there was a constant antagonism between cranium and cerebrum. It is not improbable also, that in the last years of life renewed depositions of calcareous matter have taken place, more so, probably, on the basis, than on any other part of the cranium. The frequent attacks to which the patient was subjected, exhausted, at length, the power of resistance, which is limited as well in the nervous, as in every other system of the organism.

Real hypertrophy of the cerebral substance is out of the question. We have remarked above, that cerebral hypertrophy affects but the white substance, not the gray, and the large hemispheres only, not the cerebellum, and cannot but produce a disproportion between the two. No such disproportion exists in our case. Besides, the shape of the cranium and the other facts alluded to are against such an assumption.

After the foregoing expositions, it appears that the prognosis of the kind of cerebral sclerosis described is highly unfavorable.

According to the present symptoms in each case, whether a distinct and perfect diagnosis be made or not, either a stimulant or an antiphlogistic treatment will seem to be indicated. The former will aggravate the condition of the patient in every case, which is combined with congestion of the brain or its membranes, while

theoretically it should be adopted only where the main symptoms are those of perfect depression. The debilitating course of treatment may be able, at once with the diminution of the dimensions of the body in general, to remove, for a while, the disproportion between the brain and the cranium. Taken theoretically, all this is right and promising of success. But we cannot continue to debilitate without killing the patient by exhaustion or by meningeal exudation, which so very frequently is the result of general and continued inanition.

Finally, we wish to state emphatically that we do not mean to assert that every child whose fontanel is ossified prematurely, must and will fall sick and perish with cerebral symptoms at an early age. For the premature ossification of the fontanel and sutures need not of itself absolutely and always produce congestion of the brain or its membranes, which often becomes the occasional and last cause of death. But what I assert and wish to be understood to say is this, that every child, whose fontanel and cranial junctures have been prematurely closed, and who falls sick with symptoms of cerebral irritation or depression, *is predestined to certain death*. We do not know if such has been the opinion of Condie\* who has only a few remarks on our subject, stating that "when the growth of the cranium ceases, while that of the brain continues, the morbid phenomena resulting from the compression of the brain, which invariably results, may certainly be, to a great extent, abated, the comfort of the patient increased, and life prolonged by a proper hygienic course of treatment—but all hopes of effecting a cure must be abandoned."

In giving, therefore, the preceding exposition, we have been well aware of our inability to advance, in the least, therapeutics; our only desire was to call the attention of the medical practitioner to a subject of the highest etiological, diagnostic, and prognostic interest.

Hitherto, we have taken into consideration only such cases as have exhibited the fullest extent of their morbid disposition, in consequence of their complete morbid development. One case, however, of any disease, never appears exactly like the other, the peculiarities of each individual being as marked in disease as in health. Thus, in one case, fontanels and sutures may be equally

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\* F. D. CONDIE: *A Practical Treatise on the Diseases of Children*. Fourth ed., 1854, p. 388.

and firmly closed, the cranium equally hard in all its parts, the brain under equal pressure in all directions ; in another case, the sutures will appear ossified or ossifying, but the large fontanel will be found open, perhaps pulsating ; nevertheless the pressure on the cerebral substance will be of nearly equal severity, because the fontanel alone offers the compressed brain no opportunity to escape the surrounding wall.

It is but proper that a number of cases should be observed, in which the process of ossification has not run its full course and secondary sclerosis of the cerebral substance has not been fully developed. We are not always gratified, naturally, with the observations of genuine interesting cases, for death often occurs from a trivial and apparently uninteresting cause. A child will sometimes exhibit for months the symptoms of the approaching full development of the morbid cranial condition, without our being able, while relieving it for a short time, to cure its disease. Such children are usually well-developed, both mentally and bodily, they are fleshy and lively, but sometimes for a short period appear puffed in the face, and their eyes are too brilliant. Their heads are generally warm to the touch, sometimes hot, particularly so the occiput ; it feels harder and heavier than it normally does, and is moved to and fro on the pillow, while the child is in a supine position ; there is always a relief visible, after the child has been raised, and held in an upright position, and some cold application made to the head. The child is restless sometimes for weeks or months, without any visible cause, particularly at night ; congestion of the head will sometimes manifest itself as a general flushing of the face, sometimes in single red spots of half an inch or an inch in diameter, dispersed on face and forehead, and disappearing as quickly as they spring up, and showing themselves again unexpectedly, for a few minutes. In a boy of five months, who has been under our care for some time, this symptom is remarkably developed, the child showing these red marks, especially nights, together with other symptoms of congestion of the brain, restlessness, high temperature of the head, and sometimes drowsiness. The very best symptom, and of the greatest value for differential diagnosis, is found on the examination of the outside of the cranium. Besides the points alluded to above, the sutures will be found to have fully or nearly disappeared, the

fontanel diminished in size, and the cranium in a state of hyperæmic sensibility and warmth; hyperæmia of the cranium appearing as well in company with hyperostotic development, as with rachitical mollification of the cranium (craniotabes).

Wherever this general state is found, we must have the greatest apprehensions of the future safety of our patient. The mal-development will be found as impossible to stop or improve, as to reduce the amount of phosphate of lime, to further its excretion, to enlarge the calibre of the cerebral and cranial veins, to diminish the size of the arteries, to remove, in short, all the possible causes of too rapid ossification. Leeches, cold, calomel, mustard, and a good many other remedies, antiphlogistics, resolvents, refrigerants, antiplastics, derivatives, should be resorted to cautiously, rationally, repeatedly. They are followed by good results. *But the majority of such children will die.* Only such children may be saved as will escape for the first years of life the common diseases of infancy and childhood, inflammations, exanthems, fevers. And of such children, again, the majority will consist of microcephali, blockheads, idiots, epileptics.

Every febrile disease in childhood tends to produce nervous symptoms. Hyperæmia of the brain and its membranes, and convulsions, being well known to follow many instances of local inflammatory diseases in other organs. Wherever, then, cranial and cerebral troubles have been greatest before, they may be expected to be fostered and increased by every febrile attack or disease invading the organism. In cases of a slight commencement of cranial ossification, where the single bones of the cranium are not too firmly attached to each other, febrile attacks may be less injurious, although every one, while bringing about congestion, will bring new materials to the completion of the unfortunate osseous hyper-development. Wherever the ossification of the suture and fontanels is in an advanced stage of development, one single attack of fever, or of any inflammatory disease, even for a day, may produce congestion to the brain and its membranes, in a sufficient degree to cause death by hyperæmia and pressure.

We were called to 239 Broome Street, on February 17th, 1858, to see a boy four and one-half months old, who was said to have had a slight cough for some days, and had grown worse the last night. *Status præsens* at four, P. M. : child not very robust, but well-developed; head appears to be somewhat small in proportion

to the body. The main symptom is a considerable dyspnœa, respir. 58, pulse 130, nostrils move up and down, thorax but slightly, breathing seeming to be painful. Sensorium clear, head hot, face pale, on the forehead some small red spots going and coming from time to time. No pulse can be felt through the large fontanel, all the sutures are ossified. Auscultation yields bronchial rhonchi, equally over the whole thorax, percussion gives no result. The bronchitis present would of itself give no bad prognosis, but the peculiar configuration of the head, the premature ossification of the sutures and fontanels, made the prognosis very unfavorable. The parents were told from the beginning, that the case was likely to end unsuccessfully.

18th, Nine, P. M.—Resp. 48, pulse 140, Dyspnœa not so great as yesterday. Bronchial sounds as above; percussion dull over the lower lobe of left lung. Sensorium not free. The child somnolent from time to time, sighing; the face pale, pupils react but slowly, and will float a little after having been suddenly exposed to light. Temperature of the head little higher than normal. Slight contractions in the thumb and fingers of both hands, elbow a little bent, angles of the mouth sometimes undergo slight involuntary motions.

Six, P. M.—Resp. 40, difficult, loud, pulse 154. Œdematous rhonchi in the bronchia. Hands and feet cold, nose cool, head hot, but pale. Eyes slowly rolling, pupils a little dilated, react very slowly, and very little to the light; contractures of the hands stronger than before; toes also contracted by the flexors. The child is not conscious, apparently moribund.

The child had an attack of clonic convulsions in all the four extremities, lasting about five minutes, about eleven, P. M. Afterwards the permanent contractions returned, the unconsciousness increased, coma set in, pulmonary œdema increasing. Another attack of convulsions occurred at four, A. M., on the 19th, and death five minutes afterwards.

Post-mortem examination not permitted.

S. F. of 100 Mott Street, a girl of nineteen months, well developed, who had never been troubled by any kind of disease, even the fifteen teeth having cut without any difficulty, was seized with intermittent fever, having been exposed to malarial influence, on the 18th of April, 1858. The attack did not appear to be a very



severe one, but the child did not recover her cheerfulness for the whole day nor the following night; on the next day another attack occurred, severer than the first, and with more dangerous consequences. The child remained either restless or drowsy, scarcely opening the eyes, the cheeks flushed, head burning. After the third attack of fever, on the twentieth, we were called to see the patient, who appeared to be in a critical situation. The child was drowsy, when roused, fell quickly again into what might have been taken to have been a sound sleep, sighed often, had a pale face, a hot head, contracted pupils. The cranium was hard and dense to the touch, no suture could be felt, no fontanel distinguished from the surrounding bones. The size of the head, which was round, was not abnormal. Lungs not affected, heart healthy, liver not abnormal, spleen a little increased in size. Being aware of the importance of the osseous structure of the cranium, after having seen the cases referred to above, we considered the main symptoms to be congestion of the brain and its membranes induced by the intermittent fever. Thus the indications following therefrom were, the suppression of the malarial disease, that is to say, the prevention of another febrile attack; and the removal of the secondary congestion. A large dose of sulph. chin. was given the other morning before the usual time of the attack, and no particular symptoms referable to malarial influence seemed to rise. The second indication was fulfilled by applying two leeches to the forehead, by constantly applying cold and administering calomel.

The history of the disease is very short indeed. Leeches and cold did not appear to be employed without success, for the heat of the head diminished. But the drowsiness, interrupted by restlessness, of the child became no less. The pupils remained contracted, the face pale; hands and feet began to grow cold during the night of the 20th. Slight twitchings of the angles of the mouth, and slight contraction of the fingers of both hands were first observed in the early hours of the twenty-first. When aroused, the child took a spoonful of water, which was swallowed slowly and with difficulty. In the morning of the same day a dose of quinine was administered, to avoid a new check from the attack of intermittent fever that was expected; no symptoms of fever could be observed. But meanwhile the whole aspect of the case was somewhat changed. An attack of clonic convulsions about 8 A. M., of the muscles of the forehead, face, neck, of the upper

and lower extremities, in short of all the voluntary muscles of the whole body seemed to exhaust the child rapidly and leave her in a worse state than before. Although the convulsions lasted for only ten minutes, they left the head hot and face red for more than an hour; after which time the face grew deadly pale and the pupils began slowly to dilate. The contraction of the hands grew stronger, even the elbows were inflected. Contraction of the toes were visible and did not cease before death ensued. Hands and feet were cold, the drowsiness became sopor, the sopor coma. Swallowing was no longer possible, the senses were deprived of any action. Another slight, but general attack of clonic convulsions took place at 5 P.M., symptoms of pulmonary oedema set in and rapidly increased, and half an hour later the child died.

The post-mortem examination was made on the following morning, only the head being permitted to be inspected.

Galea aponeurotica thick and pale, cranium in its greater part of a livid color. All the cranial junctures firmly joined, the fontanel no longer covered by a fibrous membrane, but of osseous structure. The anterior part of the cranium had a thickness of from an eighth to one-sixth of an inch, the posterior of from one-twelfth to one-eighth. The surface of the brain was full of blood, the meninges copiously injected. No extravasation nor exudation was found between the membranes. The gyri of the hemispheres of the cerebrum were flattened and approximated, the gray substance was thin, the white substance of a somewhat yellow tinge without bloody points when incised and even compressed. White substance hard and tough; thin slices cut from it might be suspended without breaking. Ventricles and foramen Monroi narrow, and contained no serum. Cerebellum was softer but scarcely more filled with blood, except the meninges which were also injected with blood. Pons and medulla oblongata were of no uncommon density.

A boy living in No. 203 Stanton St., the fifth child of a family with scrofulous taint, but without any decided and severe local disease, showed early the conformation of the head often referred to. The fontanel was felt not to be ossified at all, but the fibrous covering was thick, allowed of no pulsation to be felt through it, and the sutures were firmly and solidly closed. The child next in age to this one, and sixteen months older, showed the reverse of cra-

nial development, the head being large in size, and the sutures and fontanels open up to an advanced age, as is commonly found in rhachitic children. Our patient, up to nine months of age, had never been sick except from slight intestinal and bronchial catarrhs. When nine months of age he showed symptoms of intestinal catarrh, in a severe form, which was not cared for; as he had no medical attendance. Bronchitis supervened after a week and lasted for six days, during which period the child had medical care and recovered, but was much exhausted. During all this time his mental faculties did not seem to be much affected. The bronchial symptoms had scarcely disappeared, and convalescence was apparently established, when the child again showed symptoms of a severe gastro-intestinal catarrh, vomiting and diarrhœa suddenly arising again and exhausting the little patient completely. One single fit of general clonic convulsions closed the scene on the last day of July. The post-mortem examination gave some very instructive results, the principal ones of which are given in the following: The cranium was of the peculiar conformation which forms the subject of our exposition; it was fully developed, round, symmetrical, but hard and solid, the sutures were ossified, the large fontanel firmly covered although not fully ossified. The thickness of the bones a little greater than normal. The brain did not fully fill the cranial cavity, the meninges were much injected with blood, and a copious serous exudation was found, in equal proportions, to be contained in the arachnoidean sac. The brain itself nowhere soft; the gray substance was of no uncommon density, but a little thinner than usual. The white substance was of normal color, but of abnormal consistency, the substance proving hard, dense, and tough, both when touched in a mass, and when cut in slices. Lateral ventricles were narrow and contained hardly a drachm of serous fluid. No particular abnormality was found about the cerebellum.

This last case affords a particular interest, from the fact that the compression of the brain produced by the early ossification of the cranium had no direct consequences, and produced no direct cerebral symptoms. The intestinal catarrh beginning the series of diseases which terminated fatally, appears to have, together with the general bulk of the whole body, gradually diminished the size of the brain. Thus when bronchitis and fever set in, with the congestion of the meninges consequent thereon, the brain was sub-

jected to such pressure from the cranium as to be unable to allow of any dilatation of the blood-vessels. Up to this time, then, no exudation of the arachnoideal sac had taken place. But when a sudden attack of cholera infantum exhausted the child, and rapid diminution of the body and brain ensued, the general inanition and the existing disproportion between the skull and the suddenly diminished volume of the brain resulted in the copious exudation of the arachnoideal sac. Nevertheless this pathological process had no influence in changing the former condition of the brain. The pressure of the cranium on the brain had previously produced the hardness and toughness alluded to, which was still found after a part of the cerebral substance had been resorbed in the course of several exhausting diseases. Thus this case does not strictly belong to that class of morbid symptoms directly produced by the disproportion between the cranium and the compressed brain, for there have been neither symptoms of compression nor death from this cause ; but even this case tends to show the continued and persistent effect on the cerebral mass which is produced by the early closed cranium ; the consistence of the cerebral substance being unaltered even after the pressure was removed.

The other cases are those in which the acute disease was only indirectly fatal, the slowly developed but unchangeable disproportion between cranium and cerebrum giving rise to those severe symptoms which produced death. But without the acute disease supervening, the children would either have enjoyed comparative health for months or even years, until death had occurred from some other cause, or they would have survived to take the chances of their general growth and development, liable to the pressure on the sclerotic cerebrum, by the early ossified, hyperostotic cranium. This however seems to be certain, that in the first case a slight pneumonia, in the second a few attacks of intermittent fever would not have been sufficient to produce the fatal symptoms which resulted in death, without the presence of just such pathological anomalies as we have here, described ; and further, that the fatal prognosis pronounced from the beginning, was justified, we do not say by the final result, but by the prominent pathological facts resulting from the examination during life.

We desire, then, to remind our readers of the former conclusion, that children whose fontanels and sutures are prematurely ossified, and who manifest symptoms of cerebral irritation or deprés-

sion, are destined to an early death ; and further, from the arguments superadded we would deduce the following inference, that in all cases of children, whose cranial junctures are prematurely ossified, any acute or febrile disease invading the system, slight though the acute affection may be, offers a most unfavorable prognosis. At all events we feel justified in drawing the conclusion, that henceforth many cases of infantile diseases which terminate unexpectedly and unfavorably, will be at least explicable to the medical mind, and further that, to give more exactness to diagnosis, and more certainty to prognosis, the condition of the cranial fontanel and junctures in general will be deemed worthy of the closest attention and examination.



PART II.

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REPORT ON THE PROGRESS OF OBSTETRICS,

AND

UTERINE AND INFANTILE PATHOLOGY, IN 1858.





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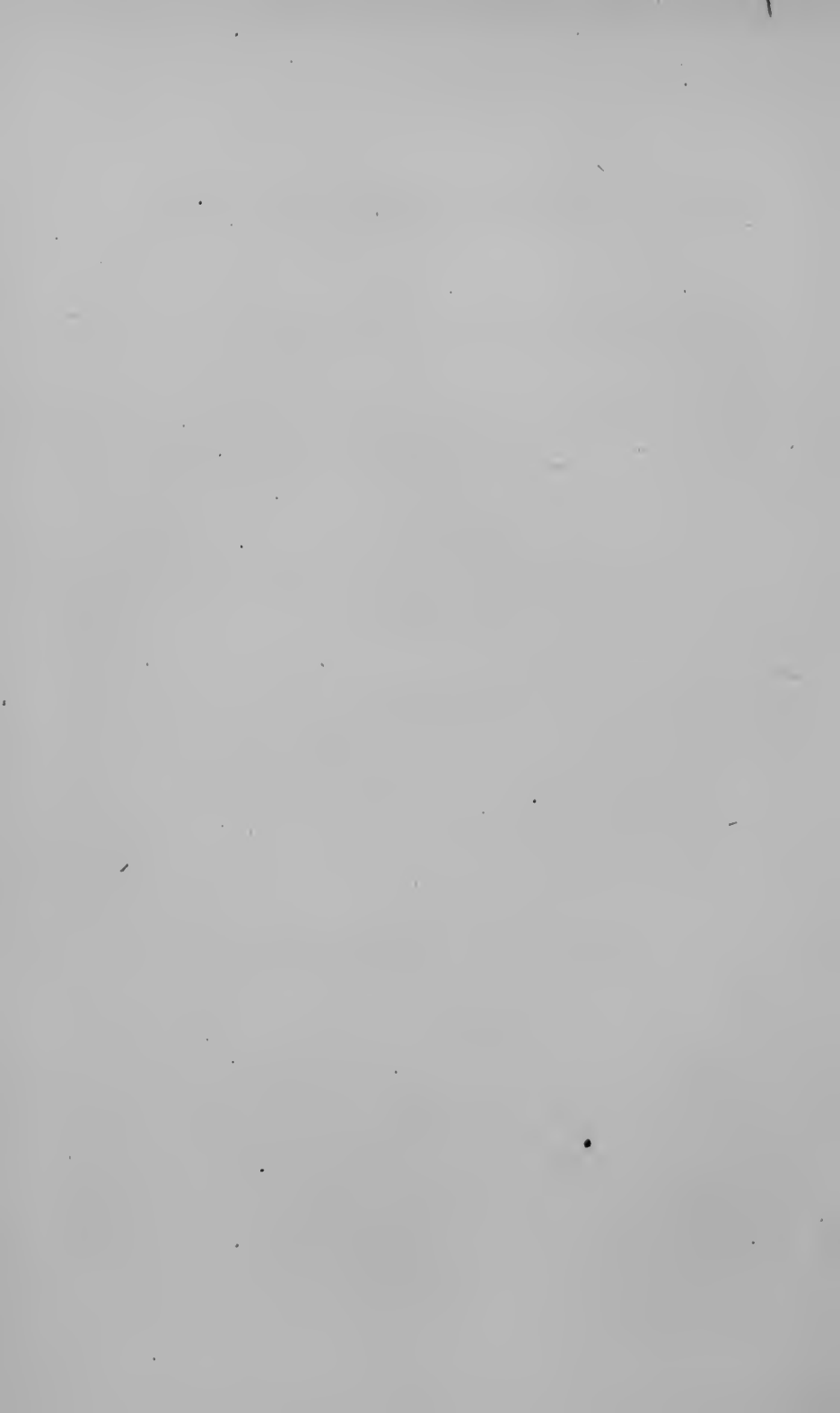
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2. *A Manual of Obstetrics: Theoretical and Practical.* By W. Tyler Smith, M.D. 12mo., pp. 628. London, 1858.
3. *Traité theorique et pratique de l'art des accouchements, comprenant l'histoire des maladies qui peuvent se manifester pendant la grossesse et le travail, l'indication des soins à donner à l'enfant, depuis la naissance jusqu'à l'époque du sevrage.* Par P. Cazeaux. 6me. edit. 8vo. Paris, 1858.
- *A Theoretical and Practical Treatise on Midwifery, etc.* By P. Cazeaux, M.D. 6th edit. Paris, 1858.
4. *Lehrbuch der Geburtshülfe.* Von Dr. Otto Spiegelberg. Mit 80 in in den Text gedruckten Holzschnitten. pp. 376. Lahr, Schauenburg & Co., 1858.
- *Manual of Obstetrics.* By Otto Spiegelberg, M.D. With 80 woodcuts, etc. Lahr, Schauenburg & Co., 1858.
5. *Lehrbuch der Geburtshülfe für Hebammen.* Von Dr. F. C. Naegele. 10te Aufl. pp. 550. Heidelberg, J. C. B. Mohr. 1858.
- *A Manual of Obstetrics for Midwives.* By F. C. Naegele, M.D., 10th edit. Heidelberg, etc.
6. *Elements of Practical Midwifery, or Companion of the Lying-in Room.* By Charles Waller, M.D., Obstetric Physician to, and Lecturer on Midwifery at St. Thomas's Hospital. Fourth edit. with plates. 12mo., pp. 193. London, 1858.
7. *Traité pratique des maladies des organes sexuels de la femme,* par M. Scanzoni, Professeur d'accouchements et de gynécologie à l'université de Wurzburg ; traduit de l'Allemand et annoté sous les yeux de l'auteur par les docteurs Dor et Socin. Paris, 1858.
- *A Practical Treatise on the Diseases of the Female Sexual Organs.* By Scanzoni, etc.—Translated from the German by Drs. Dor and Socin. Paris, 1858.
8. *Leçons cliniques sur les maladies de l'utérus et de ses annexes.* Par le Dr. F. A. Aran, Médecin de l'hôpital St. Antoine, Professeur agrégé de la Faculté de Médecine de Paris. Paris, Labé. 2 vol. 8vo. 1858 (not complete).
- *Clinical Lectures on the Diseases of the Uterus, etc.* By F. A. Aran, M.D. etc.
9. *Lectures on the Diseases of Women.* Part II. *Diseases of the Ovaries, etc.* By Charles West, M.D., etc. London : John Churchill. 1858.

10. *Practical Midwifery, comprising an Account of 13,478 Deliveries which occurred in the Dublin Lying-in Hospital.* By E. B. Sinclair, A.B., T.C.D., and George Johnston, M.D. London, 1858.
11. *Verhandlungen der Gesellschaft für Geburtshülfe in Berlin.* 10. Heft. Mit 2 Taf. Abbildungen. gr. 8. pp. 204. Berlin, A. Hirschwald.  
— *Transactions of the Berlin Obstetric Society.* 10th Vol. With 2 plates, etc.
12. *Bericht über die Thätigkeit und Verhandlungen der Gesellschaft für Geburtshülfe zu Leipzig, erstattet von E. P. Meissner.*—In *Monatschrift für Geburtshülfe.* Juni, 1858.  
— *Transactions of the Leipsic Obstetrical Society, etc.* By E. P. Meissner.—In *Monatschrift f. Geburtsh.* June, 1858.
13. *Drei und vierzigster Jahresbericht der Gebäranstalt der königl. Sächsischen medic.-chirurg. Academie zu Dresden.*—In *Monatschrift für Geburtshülfe.* XII. 6. Dec. 1858.  
— *Forty-third Annual Report of the Lying-in Hospital of the Royal Medico-chirurg. Academy at Dresden.* By Grenser, M.D.—In *Monatschrift für Geburtsh.* XII. 6. Dec. 1858.
14. *Bericht über die Vorfälle in der geburtshülflichen and gynaekologischen Klinik und Poliklinik zu Jena, während der Jahre 1855, 1856, 1857.* Von Ed. Martin.—In *Monatschrift f. Geburtsh.* XII. 3. Sept. 1858.  
— *Report of the Obstetrical and Gynaekolog. Clinic of Jena, for 1855, 1856, 1857.* By Dr. Ed. Martin, M.D.—In *Monatschrift f. Geb.* XII. 3. Sept. 1851.
15. *Jahresbericht von der geburtshülflichen Klinik für Hebammen in Wien, für das Jahr 1857.* Von Dr. Habit.—In *Zeitschrift der Gesellschaft der Aerzte zu Wien.* No. 21, 22, 23. 1858.  
— *Annual Report of the Obstetric Clinic for Midwives in Vienna, for 1857.* By Habit, M.D.—In *Zeitschrift d. Gesellsch. d. Aerzte zu Wien.* Vol. 21, 22, 23. 1858.
16. *Bericht über die Leistungen der unter der Leitung des Hofrath und Prof. Dr. v. Scanzoni stehenden geburtshülflichen Klinik zu Würzburg, vom 1. Nov. 1853 bis 31. Octob. 1856.* Von Dr. J. B. Schmidt.—In *Scanzoni's Beiträge z. Geburtsk.* Bd. 3. 1858.  
— *Report of the Obstetrical Clinic of Prof. Scanzoni at Würzburg, from Nov. 1, 1853 to Octob. 31, 1856.* By J. B. Schmidt, M.D.—*Scanzoni's Beiträge z. Geburtsk.* Vol. 3. 1858.
17. *Report of the Committee of Obstetrics of the Ohio State Medical Society.* By J. G. F. Holston, M.D.—In *Transactions of the Ohio State Med. Soc.* 1858.
18. *Report on Uterine Diseases.* By R. McMeens, M.D.—In *Transactions of the Ohio State Med. Soc.* 1858.
19. *A Report on Diseases of the Cervix Uteri.*—Read before the Medical Society of the State of Georgia. With additional notes by Joseph A. Eve, M.D., Prof. of Obstetrics and Diseases of Women and Children in the Medic. College of Georgia.

20. *Tabellarische Zusammenstellung der Ereignisse in der geburtshülftlichen Klinik zu Würzburg während der 6 Jahre vom 1. Novbr. 1850 bis 31. Oct. 1856.* Von Dr. Gregor Schmitt.—Scanzoni's Beiträge. B. 3.

—*Tabulary Review of Births Observed in the Obstetrical Clinic of Würzburg during the six Years from Nov. 1, 1850 to Oct. 31, 1856.* By G. Schmitt, M.D.

The past year has been unusually fruitful in manuals and hand-books, an accumulation of science which is certainly not required in our time. We are already in possession of so many excellent books of this kind, that there will be no need in this direction for the next decennium. On the other hand, their value is undeniable for the student of obstetrical science, inasmuch as he is thus enabled to recur to the teachings of his master in case of need, having at once occasion to make himself acquainted with the most recent state of science.

DR. MILLER'S work is essentially utilitarian in its aim, fairly representing the present state of obstetric science in this country. Dr. Miller dwells more particularly on a subject which of late has much occupied the attention of the profession, viz., the influence of inflammation and ulceration of the cervix uteri upon the course and phenomena of pregnancy. His views upon this subject appear to be identical with those which were promulgated in France and England some fourteen years ago. He says that the most prolific cause of abortion consists in a diseased state of the gestative organ, either in whole or in part; that when a portion only is affected, it is the cervix rather than the body; and that as to the particular disease itself, it is inflammation of the uterine mucous membrane, which may invade also the parenchyma of the organ. In support of this opinion he, however, merely alleges that in his experience he has had many opportunities of verifying the frequent existence of inflammation, with ulceration of the cervix uteri, during pregnancy, and of satisfying himself that it is not an uncommon cause of abortion. To support his view on this subject he points to analogous phenomena in other departments of the system. Gastro-enteritis, for example, he says, quickens and perverts the peristaltic motion of the alimentary canal, and leads to the precipitate ejection of its contents, not permitting the food to remain a sufficient length of time to be digested. In this case the food may be said to be prematurely expelled, just as the ovum is liable to be, when the organ it inhabits is inflamed.

With regard to the important chapter of puerperal hemorrhage, Dr. Miller protests strongly against artificial delivery in cases of placenta prævia, referring to the want of success which has attended it, as indicated by the statistical data collected by Drs. Simpson, Trask, and others. As a substitute for turning, he proposes a modification of a method of Puzos, which consists in originating expulsive contraction of the uterus by the tampon or plug, and then puncturing the membranes, relying on the tampon to control the flooding until the liquor amnii is evacuated. Dr. Miller asserts to have employed this method with uniform success so far as the mother is concerned.

DR. SMITH writes in a peculiarly attractive style, and in conveying his information he does it in his own words; instead of compiling quotations from other writers, whereby his influence over the mind of the student is generally increased. The physiological and theoretical portions of the book are exceedingly good. Altogether, the book is well fitted for leading students to become good and scientific practitioners. In page 62, quite a new suggestion is offered as to the nature of menstruation. Dr. S. believes that at each menstrual period the mucous membrane of the uterus is, in great part, or entirely, broken up, and its *debris* discharged, and that a new membrane is formed as a preparation for the reception of a fecundated ovum. This idea is reasonably supported by many well stated facts.

The chapters on physiology and mechanism of labor are very good, and convey a correct idea of the process.

In regard to the time when the placenta ought to be removed, we think that ten minutes is too short a time as a general rule. It is better to wait for a few efficient contractions of the womb, and let the woman enjoy some rest from the last and hardest stage of labor. The chapters on the management and retention of placenta require a larger share than is allowed to them by the author, because here the student finds his first puzzles when entering upon his practical career. The advices for management of the puerperal state are very reasonable, especially in regard to the diet, allowing nourishing food as soon as the secretions are fairly reëstablished.

Deficiency of the lochia from *retention* means to say, we suppose, from *retention* of *blood-coagula* in the womb; at least the treatment recommended admits no other explanation. The chapter on convulsions is very good in every respect. And we only can repeat, that the book is highly recommendable for students as well as practitioners.

CAZEAUX'S work is distinguished by extraordinary elaboration, redundancy of detail, and great freedom of style. With regard to ulcerations met with on the cervix uteri during pregnancy, and their influence upon the production of abortion and puerperal disease, he thinks that their importance had been greatly exaggerated, especially of those occurring in the latter half of gestation, most of which he regards as the normal condition, as a consequence of the progress of gestation. He is convinced of their non-injurious character, and therefore regards all treatment employed against these ulcerations, even when fungoid, as much more hurtful than useful. Dr. Grisolle's views on the reciprocal influence of pregnancy and parturition upon the progress of phthisis are endorsed by Dr. Cazeaux. Contrary to the general belief, they tend to show that neither pregnancy nor delivery affects sensibly the progress of phthisis, nor does the latter sensibly disturb the course of the former. The relations of albuminuria to puerperal convulsions have been very carefully investigated by M. Cazeaux. He insists very strongly upon its importance in the etiology of the disease, but regards it rather as its predisposing than exciting cause. He is strongly opposed to the employment of anæsthetic inhalations in the treatment of this disease. With regard to the induction of premature labor, our author lays it down as a rule, that it should not be undertaken before the



end of the seventh month of pregnancy, and that the smallest pelvic diameter should not be less than two inches and three quarters. Of all the methods employed for this purpose, he almost exclusively recommends the use of Kiwisch's uterine douche. The operation for the production of abortion is, in the opinion of our author, perfectly justifiable in certain cases, such as extreme contractions of the pelvis, voluminous tumors of the excavation, extreme dropsy of the amnion, irredeemable displacements of the womb, and hæmorrhages which have resisted the employment of the most rational means for their suppression. With regard to the Cæsarian operation, M. Cazeaux believes that the child ought to be sacrificed whenever the delivery can be effected by embryotomy. Rejecting the use of anæsthetics in normal labor, Dr. Cazeaux proposes their administration in the following cases: 1. For calming the extreme agitation and mental excitement which labor often produces in very nervous women. 2. In those cases in which labor appears to be suspended or much retarded by the pain occasioned by previous disease, or such as may supervene during labor, as cramps, colic, vomiting, compression of the sciatic nerve, etc. 3. In cases of irregular or partial contraction. 4. Spasmodic contraction, or rigidity of the cervix uteri. 5. Cases of eclampsia, restricted to those which appear to be manifestly due to the local irritation of an organ, whose extreme sensibility had excited the reflex-action of the spinal nerves. 6. Obstetrical operations, which are productive of much pain, or necessitate quiescence on the part of the patient—such as turning, symphyseotomy, or the Cæsarean.

DR. SPIEGELBERG'S manual of obstetrics, although a part of a medical Cyclopædia, may be considered as a work of itself, as it comprises the entire field of obstetric science. One of its greatest advantages is its practical tendency, aside from theoretical and sophistical speculation, while all the scientific researches of our time are duly recorded as far as they have regard to the physiology of pregnancy and parturition. The first pages are occupied with the description of the abdomen and pelvis. When speaking of the different diameters of the pelvis, our author mentions the so-called *normal conjugata* (G. H. Meyer), which is represented by a line, the posterior terminus of which is located in the third lumbar vertebra, while its anterior extremity reaches the superior edge of the symphysis pubis, between the two tubercula pubis. After this follows a description of the external parts; of the breasts; the obstetrical examination; the physiology of pregnancy and of the puerperal state. On page 45. M. Spiegelberg mentions the development of sebaceous glands around the nipple as a sign of pregnancy, and ascribes to Dr. Montgomery the honor of having first called attention to this circumstance. This is not quite correct. It was Prof. Røederer, of Göttingen, who first (1753) mentioned the coincidence of pregnancy with enlargement of the glands, situated in the areola of the nipple. The cause of the position of the fœtus in utero with its head downwards, is attributed to the gravity of the latter, aided by the conformation and reflex actions of the uterus itself. Therefore, cross-presentations are very often met with in an abnormal state of the

uterus, and with deformed children. For the same reason, premature and dead children rarely present with the head, because their specific weight is altered under these circumstances. The chapter on diagnosis of pregnancy opens with a consideration of the circulatory, cardiac, and umbilical sounds. The first of these is owing to the alteration of the circulation of blood in the uterine walls, in some cases to compression of the large pelvic vessels, and to a dilatation of the epigastric artery. Therefore it cannot be considered as a certain sign of pregnancy. The umbilical souffle takes its origin in the arteries of the cord, whenever the navel-string is exposed to pressure. The cause of the first labor pains is put down as a consequence of an altered circulation of the uterus, leaving it undecided whether a state of anæmia or of hyperæmia is formed, although it is more likely that the latter condition acts as an exciting cause to labor, produced by the catamenial afflux of blood to ovaries and uterus. In the chapter on physiology and dietetics of childbed, our author mentions the fact that still-born children may be resuscitated even after a lapse of a couple of hours. The pathology of gestation comprises, 1. Those affections which may be considered as an increased or altered physiological condition of the pregnant state. 2. Those accidental diseases which are unconnected with gestation. With regard to the treatment of placenta prævia, the vaginal plug is warmly and justly recommended. The predisposing element in the development of uræmia, one of the many causes of eclampsia, is the peculiar condition of the blood of pregnant women. As it is constituted very much like that of chlorotic persons, it has a tendency to the formation of œdema, to transudations, to the passage of albumen and fibrin through the kidneys, and to excite the nervous system of pregnant women. The performance of the accouchement forcé is surrounded with the most serious dangers, and its execution must, therefore, be restricted to those cases where the life of the mother is actually threatened by a long continuation of eclamptic attacks. The use of chloroform is invaluable, inasmuch as its application retards the evil influence of the convulsions upon the system, thus giving time to the accoucheur to apply whatever remedies he thinks proper to choose for promoting delivery. In the chapter on uterine hæmorrhages, the prolapsus placentaë is duly mentioned. The diagnosis of this accident meets with no difficulties, when the afterbirth protrudes from the os uteri, while it is more difficult to recognize the true nature of the case, when only a small section of the placenta has come down near the edge of the os uteri, and in this instance it is generally mistaken for placenta prævia. This prolapsus is always fatal for the child, while the prognosis for the mother is better, because the hæmorrhage is not so violent as that in consequence of placenta prævia. The collapse after delivery is due to a perfect exhaustion of the central nervous system produced by the efforts of labor. This exhaustion is mostly met with in tender, irritable women, who are little used to muscular exertions. But it is also observed in strong and healthy women, after very rapid deliveries. In this latter instance, the syncope is explained by cerebral anæmia, in consequence of a strong and sudden congestion of the ab-

normal organs. In both cases, chloroform is the remedy. The last section of the work contains a description of the different obstetrical operations. Altogether the work before us is all that can be expected from a treatise of this kind. It will undoubtedly take a prominent place among the numerous manuals of obstetric science and art.

DR. WALLER'S work contains a short exposition of obstetric science, and is intended as a manual for students and young practitioners. It is extremely meagre and commonplace in its details—exhibits but little power of analysis or condensation on the part of the author. The question of the extraction of the placenta in certain cases of placenta prævia, and the general employment of anæsthetics in midwifery, are treated of more fully.

Dr. SCANZONI'S work is a concise treatise on the pathology of female diseases, with the exception of those occurring during pregnancy, labor, and the puerperal state. The author recognises four different forms of ulcerations—1. The *erosion*, which owes its origin to a previous or existent uterine catarrh. It sometimes is preceded by a vesicular, aphthous eruption, and in this instance generally connected with an abnormal condition of the blood. M. Scanzoni attended an otherwise healthy woman, affected with aphthæ of the mouth, who, with every new eruption, exhibited also fresh blisters on the mucous membrane of the vaginal portion. She was finally cured by country air and bathing in the river. 2. This erosion, after some time, assumes the character of an *ulceration*, which takes a granular appearance by consecutive hypertrophy of the papillæ in the mucous membrane. This kind of ulceration is always connected with structural changes of the uterus itself, mostly with chronic engorgement and catarrh, both of which must be considered, in some cases, as the cause, in others as the consequence of this ulceration. Its presence constantly keeps up a state of congestion of the womb and its appendages, thus producing and increasing pathological conditions in and around the uterus. These ulcerations never heal spontaneously, but have a tendency to spread in all directions. 3. *Fungous ulcerations* are those which have a development of vascular cellular tissue; they proceed deeply into the cervical canal, and are always the seat of an abundant puriform secretion, bleeding spontaneously and when touched. 4. *Varicous ulcerations* are rarely met with, having their origin in a chronic stasis in the uterine walls. At the beginning of the disease the vaginal portion has a blueish red hue, like the appearance in advanced pregnancy; afterwards dark spots and varicous veins are observed, upon which the softened mucous membrane forms slight elevations. Finally, the epithelium decays, and the erosion, with a blueish red and vascular base, increases to a broad ulceration. The erosion is, in most instances, curable in four weeks. The treatment should be begun with the application of leeches, to be followed by the application of a caustic solution (arg. nitr.  $\text{Ḑi}$ , aqu.  $\text{ʒi}$ ) every five or six days. The granular ulceration demands repeated local depletion every sixth or eighth day, warm hip-baths, alum injections, stronger cauterizations, and the use of aperient mineral waters. The excrescences of the fungous ulcer-

ation have to be removed as much as possible with scissors, and afterwards a strong caustic solution ought to be brushed over the diseased surface as far as it extends into the cervical cavity. Generally, the excision has to be repeated four or six times; instead of leeches, blood ought to be abstracted by scarifications.

One hundred and eight women, afflicted with cancer uteri, came under the author's treatment, and seventy-two of them had borne a large number of children (four to eleven). The most important predisposing causes to cancer seem to be depressing mental emotions; it was possible to trace the origin back to this source in eighty-four cases; in fifteen patients excesses in venere were admitted; in eight patients chronic engorgement, with or without ulceration, preceded the development of cancer. Only three cases of neuralgia uteri came under the author's notice, and only one of them was cured—by marriage. In small, unilocular ovarian cysts, good results were obtained by Kiwisch's method, a catheter being left in the opened cyst; eight patients in fourteen being radically cured; three leaving before the treatment was concluded; one dying two months after the operation from typhus fever; while in two of them the cyst filled anew. The operations performed for atresia vaginæ had such unfavorable results, that Dr. S. has abandoned operating upon the vagina, and resorted to puncturing per rectum, in the hope that this operation will prove more satisfactory.

DR. WEST's work, although chiefly occupied by descriptions of and discussions on ovarian disease, contains several chapters of other subjects. The three last are on diseases of the external organs of generation, of the urethra and vagina, and of the female bladder; while the two first are on inflammation of the uterine appendages, seven chapters remaining for the diseases of the ovary. A great number of cases, usually put down as acute or chronic ovaritis, ovarian irritation, and pains in the unimpregnated female, are actually very often the results of acute and very limited peritonitis. In twenty-one out of sixty-six instances in which Dr. West examined the uterus and its appendages, the ovaries themselves, or parts immediately connected with them, presented changes, more or less obviously due to inflammatory action. In ten of the twenty-one cases, the main evidence of inflammation consisted in traces of old peritonitis of the uterine appendages; and in five of the number there was no evidence of mischief. The amount of this peritonitis varied accordingly. In some instances its results were nothing more considerable, than a thin and partial layer of false membrane on the surface of one or other ovary, and long, filamentous adhesions between the ovary and fallopian tube. In other cases a complete web of false membrane enveloped the ovaries, thickened the broad ligaments, and by its contraction shortened the ovarian ligaments. Acute inflammation of the proper tissue of the ovary is occasionally a phenomenon of puerperal fever, as it occurs at an early stage of ovarian dropsy; but apart from this it is not a common affection of the unimpregnated female.

A frequent disease at this region is ovarian pain. It is generally aggravated at the menstrual period, and often connected with dis-

ordered general health, in most cases easy to mitigate, but very hard to cure. Leeches and blisters sometimes afford ease for a shorter or longer space of time ; chloroform locally applied gives temporary relief. The camphor liniment, with extract of belladonna, is another external application which Dr. West has found advantageous ; and when these means have been fruitless, the tincture of aconite has been applied with advantage. Attention to the general health must always go hand in hand with the local treatment—must indeed hold the first place. The tonics which do the most service are the sulphate of quinine and the valerianate of zinc.

The appearance of ovarian cyst is observed almost invariably within the child-bearing period of life. The characteristic forms of this disease are believed by Dr. West to take their origin in one or more graafian vesicles. Small ovarian cysts are often observed to have contents, more or less like those of a graafian vesicle, and sometimes even a little clot of blood, the analogue of a healthy condition of the part, the graafian vesicular menstruation. To complete the proof, Rokitansky has discovered an ovule in a young ovarian dropsy. But while the graafian vesicular origin of the disease in many cases is admitted, others cannot be excluded ; at any rate the question remains undecided. Dr. West is of opinion that a cyst, originally barren, may become proliferous ; that its continuing simple is rather a happy accident than a condition, on the permanence of which we cannot calculate with any certainty. The different means for curing an ovarian cyst are—1. Excision. 2. Injection with a solution of iodine. 3. Tapping of the main cyst. 4. The ovarian dropsy may be let alone. After the researches of Dr. West, one of two dies after ovariectomy. Of the cases in which the operation is attempted, it is left unfinished in about one-third, and of these latter, again, about a third terminates fatally. Dr. West, therefore, rejects ovariectomy, and is greatly in favor of iodine injections. The operation of tapping per vaginam, and subsequently keeping the wound open, has as yet been little practiced, but the results seem to encourage further trials.

Messrs. SINCLAIR and JOHNSTON's work on Practical Midwifery, consists of an account of 13,748 deliveries which occurred in the Dublin Lying-in Hospital during the seven years of Dr. Skeleton's mastership, while the authors were assistant-physicians for the greater part of that period. The preface of the work contains an interesting account of the origin, progress, and management of the hospital, and a description is also given of the general routine treatment which patients undergo from the time of their entrance to their discharge when convalescent. All labors are arranged under four principal heads :—1. Natural. 2. Difficult. 3. Preternatural. 4. Anomalous. The proportion of male to female births is 105 boys to every 100 girls. The total number of still-born children was 968, or about 1 in every 14 of those born. Of these, however, 487 were putrid at the time of birth. Of the 481 non-putrid children, 284 were males and 197 females, which shows that male children are exposed to greater risks immediately before and during birth than females. The total number of maternal deaths from all causes was about 1 in 84 ; deducting, however, 17, which were admitted dying in the

hospital ; the mortality was 1 in 94. Of the 163 women dying from all causes, 40 died from other than puerperal ones, thus leaving 123 deaths out of 13,748 deliveries directly traceable to the labor ; or about 1 in every 111 women delivered died from puerperal causes. In the months of December in each year, the greatest mortality was found to prevail, the ratio being 1 in 46, and the lowest in May, the ratio being 1 in 184. Of those labors which terminated within the first hour, 1 in 110 mothers died ; while of those women who were delivered during the second and third hours, only 1 in 243 died. In the first six hours the proportion of maternal deaths is 1 in every 178 ; from seven to twelve hours, 1 in every 144 ; and from thirteen to twenty-four hours, 1 in every 124. In those cases where labor was prolonged beyond twenty-four hours, but in which there was no interference, the mortality reaches as high as 1 in every 20½.

The forceps deliveries amounted to 200, and the craniotomy cases to 130. The mortality in the forceps cases amounted to 11 mothers, or about 1 in 18 ; and 17 children, two of the latter being putrid at birth. Of the craniotomy cases, 26 mothers died, or 1 in every 5. In using the forceps, traction was made during a pain only, in the direction of the axis of the pelvis, and no motion whatever was permitted in a lateral direction. Craniotomy was never had recourse to when the forceps could be applied, even if the child's heart had never been heard during labor.

In prolapse of the funis, considerably more than one-half of the children were lost. Accidental hemorrhage occurred in 81 labors, 4 mothers dying and 27 children being dead-born ; instrumental interference was needed in 8 cases. Of placenta prævia, only 24 instances occurred in the entire number of deliveries. Of these, however, 6 mothers died. Of the 8 cases of complete placental presentation, only 3 recovered, and only 3 children were born alive. The treatment adopted was according to the circumstances of each particular case. In all cases of post-mortem hemorrhage, a stream of cold water was thrown into the uterus, and with the best success. Induction of premature labor was performed in 4 cases, and each of the mothers recovered, but only 1 child was saved. In two cases, where it was induced on account of general dropsy, both mothers died. Chloroform was given in nearly all cases before operation, and during the seven years not a single accident took place that could be attributed to the use of chloroform. Of puerperal fever, which, however, never appeared in a severe epidemic form, 129 cases are reported, or 1 in every 106 of the whole. Eighteen cases of trismus neonatorum are present in this report, and all died within ten days ; it seemed to make its appearance in an epidemic form.

From Dr. GRENSER'S report we take the following data. In 1857, 433 pregnant women were received in the Dresden Lying-in Hospital. Of 412 deliveries, 373 were effected without surgical interference ; 20 by the forceps, 1 by turning, 5 by extraction, 3 by perforation and cephalotripsy, 1 by accouchement forcé ; while in nine cases artificial removal of the placenta was required. All the women recovered with the exception of 5 ; out of this number 2 died from peritonitis, 1 from pyæmia, 1 from uræmia, and 1 from ruptura uteri.

The number of new-born children was 414, among which were two pairs of twins, altogether 219 boys and 195 girls; 18 male and 6 female children were still-born, and all of them resuscitated; 13 boys and 9 girls died before delivery, 4 in far advanced maceration, 1 immature, 3 from pressure of the cord, 1 from internal hæmorrhage in consequence of uterine rupture, 3 from compression of the brain during the passage of the head through a contracted brim, 3 from protracted labor, with consecutive craniotomy.

The presentations were as follows :

303 in I.	cranial.	4 in I.	breech.
89 in II.	"	6 in I.	feet.
3 in III.	"	2 in II.	"
1 in I.	facial.	1 in II.	shoulder.
1 in II.	"		

In 4 cases the presentation was not noted.

The largest placenta was 8 and 9 inches in its diameters, the smallest 4, while 45 placentas had fibrinous, and 5 had calcareous deposits on their uterine surface.

The indications for the 20 forceps operations were: 9 for increasing diminution of the foetal pulsation in force and frequency; 5 for prolapsus of the funis; 1 for imminent suffocation of the mother, in consequence of a large struma lymphatica; 1 for eclampsia; 1 for internal hæmorrhage from ruptura uteri; 1 for metrorrhagia in the last stage of labor; 3 for rhachitic contraction of the pelvis. Five out of these 20 children were born dead; 5 were still-born, and revived; 2 mothers died; 1 from eclampsia; 1 from ruptura uteri.

From the statistical tables reported in Dr. MARTIN'S report, we take the following facts :

1855.—Of 88 new-born children (1 pair of twins and 4 still-born), 38 were of the male, 50 of the female sex. Obstetrical operations were required 35 times, among which was 1 Cæsarian operation post mortem, giving a dead child; 15 forceps operations; 4 craniotomy-forceps operations.

1856.—Of 111 children born in the hospital, 4 were still-born, and 1 pair of twins. In the polyclinic, 1 case of premature quadruplets was observed. The examination of the afterbirth showed that three ovules had been fructified. There were altogether 98 cases of dystocia (out of 159 deliveries) and 37 operations, among which were 18 forceps operations.

1857.—Of 164 deliveries, 7 cases of twins occurred, giving a total of 171 children born, among which were 100 males and 71 females; 16 of them died before or during confinement. In these 164 cases, 46 operations were required. The transfusion of blood was successfully performed in a case of hæmorrhage from placenta prævia.

#### PRESENTATIONS.

Nægele's I. Cranial presentation . . . . .	224	Presentation of nates, II. . . . .	1
" II. " " . . . . .	119	Foot presentations, I. . . . .	2
" III. " " . . . . .	2	" " II. . . . .	3
" IV. " " . . . . .	1	Knee presentation . . . . .	1
Undecided " " . . . . .	9	Transverse presentations . . . . .	2
Facial presentation, I. . . . .	1		
Presentation of nates, I. . . . .	3		
			370

After 52 forceps operations, 2 mothers and 5 children died.

Dr. HABIR's report contains the following: There remained from last year 80 pregnant women, 77 in childbed, 67 children; 3,835 pregnant women received in the hospital, of which 3,795 were delivered, 33 dismissed undelivered, 87 remained at the end of the year. Of 3,872 women in childbed, 3,702 were dismissed healthy, 83 died, 87 remained. Of 3,727 children, 1,965 were males, and 1,762 females; 119 were still-born (65 males, 54 females); discharged 3,568 children, 146 died, 80 remained; 860 were so-called "gassengeburten" (*i.e.*, women delivered immediately before entering the hospital); premature confinements, 249; twins, 51; 3,663 cranial presentations, 27 face presentations, 95 foot and nates presentations, 52 cross presentations. The operation of turning upon the head was performed in 21 cases, upon the feet in 32; inductions of premature labor, 2; convulsions, 13; hemorrhages, 35; ruptura uteri spontanea, 2; forceps operations, 43; perforation, 5; Cæsarian operation post-mortem, 1; artificial removal of the after-birth, 15; diseases of the puerperal state, 182; deaths, 83.

From Dr. J. B. SCHMIDT's report we give the following facts of 879 births; 869 were simple, and 10 twin-births; 839 children born alive, 50 dead:

I. Cranial presentation.....	606	Feet presentation.....	6
II. " " .....	231	Cross " .....	18
I. Facial " .....	1	Uncertain " .....	11
II. " " .....	3		
I. Breech " .....	12		889
II. " " .....	6		

Atonic pains were observed in 42 cases, and treated with the colpeurynter, the douche, carbonic acid, or ergot of rye; spasmodic pains, 24; treatment: opium, tepid baths, chloroform, colpeurynter and douche; ruptures of the perineum, 18, three being to the sphincter ani; to prevent perineal ruptures, the labia were incised 85 times; pelvic deformities 15, 7 delivered naturally, 3 with the forceps, 2 by perforations and cephalotripsy, 1 by extraction on one foot, 2 by induction of premature confinement. Eclampsia observed in 1 case, chloroform used, mother died suddenly. Placenta prævia partialis, 3 cases, colpeurynter, opening of the membranes; plac. pr. central., 1 case, turning and extraction of the child; three mothers recovered—one died afterwards from puerperal fever—2 children born alive, 2 dead. Prolapsus of the funis, 11, 6 with cranial presentations. Induction of premature labor was performed 3 times. Case 1.—Hydræmia, catarrh of the kidneys, dyspnœa; application of sucking-glasses to the breast nine times in three days, inefficient pains; douche twice a day for a week, insufficient pains; injections with *secale cornutum*, strong pains, os dilated to the size of a guilder; membranes detached with the sound, two hours afterwards birth of a dead child weighing  $2\frac{1}{2}$  pounds; mother recovered. Case 2.—Pelvic contraction, antero-posterior diameter  $3\frac{1}{4}$  to  $3\frac{1}{2}$ , induction of premature labor by six applications of carbonic acid to the vaginal portion in five days; child born alive, mother recovered. Case 3.—Contracted pelvis, sucking-glasses, douche, colpeurynter, all without exciting labor pains; tapping of the membranes; cross presentation, turning; child dead,



mother recovered. Case 4.—Contracted pelvis, carbonic acid gas, injection of decoctum althææ, plugging of the vagina (Shæller,) opening of the membranes (Meissner's method); child born dead, in foot presentation; mother recovered after being taken with endometritis. Forceps operation 47, all mothers recovered except one, who died from puerperal fever; 42 children born alive, 5 dead. Craniotomy 2, both from contracted pelvis; one mother died from endometritis and pyæmia.

From Dr. GREGOR SCHMIDT's report it appears that during the six years from 1850 to 1856, 1,639 women were delivered in the lying-in hospital, and among this number 27 twin births were observed, making a total of 1,666 children, of which 1,536 were born alive, 130 still-born; 113 of the children born alive died afterwards in the hospital.

I. Cranial presentations.....	1109	Breech presentations.....	25
II. " " .....	443	Feet " .....	23
I. Facial " .....	6	Cross " .....	24
II. " " .....	4	Uncertain " .....	26

Operations: 1. Inductions of premature labor, 6; mothers recovered, 6; children born alive, 3; dead, 3. 2. Forceps operations, 100; mothers recovered, 94; died, 6; children born alive, 80; dead, 20. 3. Extractions, 39; all mothers recovered; children born alive, 26; dead, 13. 4. Turning by one foot, 24; mothers recovered, 22; died, 2; children born alive, 12; dead, 12. 5. Craniotomy, 5; mothers recovered, 4; died, 1; operation with Van Huevel's forceps-scie., 1; mother recovered.

Dr. HOLSTON's report discusses in separate chapters the history of midwifery in Ohio; its theory and practice, comprising a consideration of "the frequency of midwifery" and natural labor; tedious and difficult labors, more particularly in reference to ergot as a remedial agent; statistics of natural and preternatural labors; the diseases of puerperal women; and obstetrical literature and education.

Dr. McMEEN's report on uterine diseases, consists chiefly of an account of four interesting cases. One of hypertrophy of the womb, with excessive flow of the catamenia—mistaken for a case of poly-pus uteri. The second case is one of intractable dysmenorrhœa. The third case is one of intense hysteralgia excited by the use of ergot taken with a view to the production of abortion; while the fourth is one of extensive vesico-vaginal fistula, caused by malpractice in a resort to instrumental interference, merely to gain time.

## II.—ANATOMY AND PHYSIOLOGY OF THE UTERUS AND OVARIES.

1. Aran, F. A., *Anatomical and Anatomico-pathological Researches on the "Statique" of the Uterus*.—Archiv. Génér., Feb. and March. N. Y. Jour. of Med. VI. 1. July.
  2. Guyon, F., *Etudes sur les cavités de l'utérus à l'état de vacuité*. Thèse. Paris, Mars, 1858.
- Guyon, F., *on the Condition of the non-Pregnant Uterine Cavities, etc.* Thesis—N. Y. Jour. of Med., V. 3, November.

3. Dumas, *on the Uterus and Ovaries of a Virgin, who died a few days after Menstruation*.—Rev. therap du mid. xi. p. 293.
4. Priestly, W. O., *Lectures on the Development of the Gravid Uterus*.—Delivered at the Grosvenor Place School of Medicine. Med. Times and Gaz., 438, Nov. 20, etc.
5. Robin, Ch., *Memoir on some Points connected with the Anatomy and Physiology of the Mucous Membrane, and the Epithelium of the Uterus during Pregnancy*. Brown Sequard's Jour. de Physiol., January, and New Orleans Med. News and Hosp. Gaz., July and August.
6. Dalton, S. C., *on the Anatomy of the Placenta*.—Amer. Med. Monthly, July. N. Y. Jour. of Med. v. 3, Nov.
7. Luschka, *on the Liquid Portion of the Graafian Follicle*. Wurtemb. Naturw. Jahresh. Jahrg. 13. N. Y. Jour. of Med. V., 1 July.
8. *Uterus and its Appendages*. By Dr. Arthur Farre, London, 1858.
9. Beale, *Liquor Amnii containing much Urea*. Archives of Med. No. II.
10. Hillyer, E., *an Essay on the Physiology of Menstruation*. South. Med. and Surg. Jour. xiv., 12, Dec.
11. Spiegelberg, O., *on the Nervous Centres and the Motion of the Uterus*.—Henle and Pfeuffer, Ztschr. 2. N. Y. Jour. of Med. v. 1 July.
12. Savory, W. T., *an Experimental Inquiry into the Effect upon the Mother of Poisoning the Fetus*.—Lancet, June. N. Y. Jour. of Med. v. 2 Sept.
13. Giraudet, E., *on the Value of the Current Theories for the Explanation of the Causes of Menstruation*.—Gaz. des Hôp., June 15.
14. Kirsten, Th., *on Glycosuria Lactantium*. Monatschrft f. Geb. ix. 6. N. Y. Jour. of Med. iv. 3. May.
15. Riedel, *on Glycosuria in Pregnant and Parturient Women*.—Monatschrft f. Geb. x. 2. N. Y. Jour. of Med. iv. 3. May.
16. Brücke, *on Glycosuria of Women in Child-bed*.—Wien. Med. Wochenschrft. 19, 20.
17. Hewitt, G., *on Coagula Formed in the Veins during the Puerperal State*.—Lancet, April.
18. Savage, *on the Erectile and Venous Systems of the Pelvic Organs*. Lancet, Feb. N. Y. Jour. iv. 3. May.
19. Rouget, Ch., *on the Female Erectile Organs, and on the Tubo-Ovarian Muscular Apparatus in its Connection with Ovulation and Menstruation*. Jour. de Physiologie, etc., No. 2, 3, 4.
20. Lee, R., *on the Membrana Decidua which surrounds the Ovum in Cases of Tubal Gestation*.—Lancet 1, April.

By far the most valuable contributions to obstetric anatomy and physiology, which we have received from France, are Dr. Rouget's article on the erectile organs of the female, and Dr. Aran's statistical researches on the "statique" of the uterus. They are replete with new ideas and scientific researches. Next to these, we place Dr. Dalton's article on the anatomy of the placenta, who by one bold experiment seems to have decided the question with regard to the manner in which the fœtal part of the placenta is connected to that of the mother.

Under the name statique of the uterus, DR. ARAN comprises its sit-

uation as far as it is established by its anatomical condition, and as far as it is liable to be changed by different circumstances. Thinking that even now the discussion in regard to this subject had by no means come to a satisfactory result, the author intends to review the opinions current, and to add new observations and opinions of his own. Of the different ligaments believed to sustain the uterus in its position (two lateral, one anterior, one posterior—*plicæ Douglasii*), he thinks the latter alone deserve the title of ligament, because of their fibrous texture. His inquiries in regard to these structures differ somewhat from the description given of them by the most reliable anatomists: 1. It is not the inferior portion of the uterine neck from which they start, but from the point where the collum and corpus uteri meet. 2. Instead of two ligaments there exists in reality but one, because the inner and posterior fibres form but one continued layer, without any line of demarcation, while the middle strata cross each other in the median line, and the external bundles are mixed up on each side with the uterine tissue itself. 3. These ligaments do not always surround the cavum recto-vaginale, *i. e.*, they do not comprise in every instance the rectum in their posterior department. 4. They do not stop in the middle portion of the pelvis, but extend their ramifications as high as the fourth, and sometimes the fifth, lumbar vertebra. Moreover, the direction of the posterior ligament is not from below upwards, but it runs in the opposite direction; nor does it extend in one straight line from the uterus to the sacrum, but near the latter point it spreads outwards. Therefore its influence upon the position of the uterus is to prevent descent towards the outlet of the pelvis, retaining it over the neck near the os sacrum. These ligaments almost disappear during pregnancy, while they exhibit an enormous state of hypertrophy when the uterus is retroverted. The ligamenta rotunda are not intended to keep the uterus in its elevated position, but merely prevent the fundus from falling backwards; therefore the operation of shortening the round ligaments, as proposed by Dr. Alquié for curing prolapsus uteri, would prove a failure. Notwithstanding Dr. Stoltz's experiment, who removed the entire vagina without producing an alteration in the position of the womb, it seems probable that the vagina has some influence in retaining the uterus in its position, as is proven by the good result following artificial constriction of the vagina for the purpose of curing the falling of the womb. Dr. Aran, far from underestimating the importance of the vesico-uterine ligament as a means of influencing the position of the uterus, cannot agree entirely with Prof. Virchow's views, who seems to consider the adherence of the uterus with the bladder to be one of the chief points of its support. The conclusions drawn from these remarks are as follows: 1st. The uterus is suspended in the pelvic cavity of the adult female by a *complet* of different means of suspension, composed of the insertions of the bladder and vagina in front, of the vagina and the posterior ligaments in the rear, and laterally of the vagina and the lateral fibres of the posterior ligament. 2d. The combination of these means of suspension establishes a real axis—“*axe de suspension*”—around which the movements of the uterus are completed. The relation of

the uterus to this "axe de suspension," is not yet fully ascertained. In following the natural development of the uterus from the very first months of existence, it is an acknowledged fact, that in foetal life the body of the womb is always somewhat bent upon its neck, which flexion disappears the more the female advances in years, and above all it is the pregnant state which corrects this flexion of the uterine body. Dr. Gosselin found, in forty-eight post-mortem examinations of women who had never been pregnant, twenty-seven more or less decided antelexions of the womb, eighteen perfectly straight, and three dubious cases. Dr. Aran found, among nine young virgin females, from 17 to 27 years of age, six decided antelexions, two retroversions, and one straight uterus; of ten married sterile women, there were six below 24 years of age with decided antelexions, two with anteversions (one of them 48, one 49 years old), two with an almost straight uterus (18 and 55 years old); of twenty-one women who had borne children, seven exhibited unmistakable antelexion (23 to 27 years old), three presented a slight inclination in front (33, 40, and 57 years old), two showed retroversion (age, 28 to 40 years), in four the axis of the uterus followed that of the upper pelvis (ages, 26, 28, 33, and 44), in five cases the womb was retroverted (age, 22, 25, 40, 44, 45). In all of these cases no traces of uterine disease had been exhibited during life. This shows that 50 per cent. of the examined (post-mortem) women had an antelexed womb, the cases belonging almost exclusively to young women and those who had never borne children. Therefore, in childhood and puberty the axis of the womb does not follow the axis of the upper pelvis, but is more or less inclined in front, which disappears the more the woman advances in years, and after she has been pregnant. In regard to Dr. Cruveilhier's opinion, that the axis of the uterus in the living female changes with the position of the body, Dr. Aran thinks that this state of indifferent axis is not the rule, but the exception, it being only met with in those cases where the means of suspension around the uterus are in a state of weakness, such as occur in consequence of repeated confinements. One thing is certain, that the uterus of *healthy females* may be found, in antelexion or forward inclinations, quite straight, and in the direction of the upper pelvis, or in an indifferent position, following simply the laws of gravitation. The foetal antelexion of the uterus, Dr. Aran considers to be the result of the pressure of the abdominal viscera upon the extremely soft and flexible body of this organ. In more advanced age, the walls of the body of the uterus thickening, and the point of union between body and neck settling lower down, the condition favoring a state of antelexion, disappears. In those cases where antelexion remains after the years of puberty, and, what is very rare, after pregnancy, the shortening of the round ligaments may be accounted for, in consequence of which the uterus is unable to be sufficiently thrown backwards by the bladder when filled with urine. There are two kinds of uterine obliquity; in the first instance the neck remains in its position, while the body is bent upon it towards the right or left side; in the second instance, one of the superior corners of the uterus is drawn upwards and in front, the other side of the womb being placed in the opposite

direction; so in both cases the corresponding round ligament, and generally the utero-sacral ligament, are shortened. The greatest difference between the two round ligaments, as observed by Dr. Aran, was 95<sup>mm</sup>.; the greatest number of these lateral inclinations is found among children, which condition seems to disappear as they advance in years. From these researches it appears that it is wrong to consider and treat anterior and lateral inflexions in young females, as pathological conditions, especially if they do not give rise to dysmenorrhœa or sterility, in more advanced years.

DR. GUYON applied a stiffening substance for injecting the uterus, in order to find out the shape and dimensions of its cavity at the different stages of life. The results obtained in this way may be comprised as follows :

1. *From birth to the time of puberty.*—The axes of the arbor vitæ are greatly developed, especially towards the upper extremity of the neck, so as to form an isthmus almost obliterating the cavity, from whence they diminish rapidly in size, ramifying towards the cavity of the body. A cavity of the womb does not exist, properly speaking, because the elevations of its internal surface touch each other entirely. The shape of the cavity is such, that it shows at its lower end a larger size, while from this point it contracts gradually up to the fundus, where the intertubular diameter is smaller than that of the entrance. The cavity of the body measures a little less than one-fourth of the entire length of the organ.

2. *Virgin and nulliparous uterus.*—The cavity of the body appears to be divided in two sections, one starting from the neck, narrow and long, the other intertubular, formed by two trigons connected at their basis. The three sides of the cavity are convex; the lateral ones at first very obliquely directed, suddenly change their direction, approaching a vertical line on the summit of this second portion of the body.

The cavity of the neck is only a few millimetres larger than it was immediately after birth; it is enlarged somewhat in the middle, restricted at the entrance, and not changed at its upper extremity. The shape of the mouth is generally that of a transverse slit, and not circular. The lateral columns present the same elevation as in the fœtus, in consequence of which the internal orifice is closed up by the natural rigidity of the uterine tissue. The folds representing the branches of the arbor vitæ are arranged in such a way that their free edge looks towards the orifice, so that they may arrest in some instances the entrance of a probe. In virgins, the length of the cavity of the neck exceeds that of the body, notwithstanding the latter one has considerably increased. In women who are used to sexual intercourse, the difference of both cavities is null, or a trifling increase of the cavity of the body.

The isthmus represents a cylinder of 5 or 6<sup>mm</sup> in length, measuring 4<sup>mm</sup> in its transverse, and 3<sup>mm</sup> in its antero-posterior diameter. The total capacity of the cavities is from 3 to 5<sup>ccm</sup>.

3. *Multiparous uterus.*—Cavity of the body perfectly triangular, inclosed within convex lines, but less so than in the virgin uterus, so that the uterine horns are enlarged at the expense of the inter-

mediate cavity. The vertical, as well as the lateral diameters are increased, while the cavity of the neck is larger, but shortened, owing to the contraction of the vaginal portion.

The internal orifice (isthmus) is wider and shortened, but always closed by the projections of the walls, and the *arbor vitæ* continues to be perceptible. The capacity of the cavities is from 5 to 6 cm.

4. *Uterus at the change of life*.—The internal orifice is generally obliterated. The cavity of the body, more or less distended by a transparent mucus, has generally retained its shape, and has gained a few millimetres in height. The neck has decreased in length, so much so that, as a general rule, the vaginal portion has disappeared. After the external orifice is closed up in old women, the cavity of the womb exceeds in length that of the neck from 10 to 12 mm; in multiparous females, 0.004 mm; in nulliparous women, who have had sexual intercourse, both cavities are almost equal in length; in virgins, the cavity of the neck is 0.003 mm longer than that of the body, and 0.006 mm in the foetus. From these researches, the author concludes that the uterine constrictions are always seated in the isthmus, and that they may result from a flexion, and more especially from retroflexions with rotation. The penetration into the peritoneum of intra-uterine injections, though manageable after death, is prevented in the living female by contractions of the womb.

DR. ROBIN remarks that most modern authors are of opinion that the *membrana decidua serotina* (*m. caduca inter-utero-placentaris*) is discharged with the placenta, like the rest of the decidua with the chorion. This is not exact, nor is it quite true that the placental villousities are imbedded in the serotinous sinuses, like roots of plants in the soil. The inter-utero-placental *membrana caduca* is that portion of the uterine mucous membrane, at the level of which the chorial villousities are hypertrophying for forming the placenta. While the rest of the mucous membrane atrophies as *membrana caduca*, this portion, in connection with the placenta, remains in a state of great vascularity. Its enormous venous sacs are in direct communication with the venous sinuses of the muscular layer. These enlarged veins are in communication with the *circular sinus* of the placenta, which is, in fact, nothing but one or more of the serotinous veins. If a woman is delivered in her seventh or ninth month, the *membrana caduca vera* and *-reflecta* are entirely removed, but only half of the serotinous *caduca*, because its sinuses are found divided nearly in their midst, while the greatest portion remains attached to the uterus.

The *uterine surface* of the *placenta*, when removed at the full term, is covered with a thin, greyish membrane, of  $\frac{1}{2}$  or 2 mm. This membrane is unquestionably nothing but the thickened *epithelium* of the *inter-utero-placental* mucous membrane of the uterus, and the most superficial portion of the mucous membrane. Its microscopical elements are hypertrophied epithelial cells, an amorphous substance, molecular granulations, etc. This fact was first noticed by the author of this article. Therefore, the placental villousities are separated from the serotinous sinuses by interposition of this thin membrane, and the contact of the foetal blood with that of the mother is

by no means a direct one. The same disposition has been observed in a great number of different classes of animals, viz., that the vascular system of the foetus is only connected with that of the mother by juxtaposition. That portion of the uterus where the placenta was located, is covered with the serotina, even after the detachment of the placenta, with the exception of that thin superficial layer which adheres to the placenta. This remaining portion of the uterine mucous membrane is not exfoliated, its vessels being in immediate connection with those of the muscular stratum, and, therefore, a fresh mucous membrane is not formed between the serotina and the uterine muscularis, as it exists between the latter and the uterine caduca. The serotinous membrane of a woman, who dies in the seventh or ninth month of gestation, presents an aspect very different from that of a woman who dies two or ten days after confinement. In the former instance it is soft, as large as the placenta; the sinuses are flattened; their long diameter prevailing; its surface is slightly wrinkled, but comparatively even. After confinement the serotinous surface becomes much smaller from the contraction of the uterine walls; its form, instead of being circular, is irregularly oval, with a sinuous, incised border; it is a thick, folded, rough membrane; its surface becomes after a while softened, and of a mucous consistency. The irregular edges of this serotina are found, a few days after confinement, to enter into connection with the soft, new mucous membrane which lines the rest of the uterus. This reddish, irregular, flocculent appearance of the serotina has often led to mistakes, as it was taken for a portion of the adherent foetal placenta, in cases of death after puerperal fever. Several days after confinement, this remaining portion of the inter-utero-placental caducous membrane is diminished in size and thickness; it begins to soften and decay, to be replaced by a new mucous membrane.

While the epithelium of the uterine cervix retains its cylindric character throughout the time of gestation, that of the cavity of the womb passes gradually from the cylindric into the pavement form. This phenomenon must not be understood to be a strict transformation of one into another form, but it is rather an exfoliation of the old cylindric cells, which are replaced by new epithelial cells of the plated variety. But the most remarkable change is observed in those epithelial cells which are placed between the placenta, and the vascular portion of the uterine mucous membrane (*m. caduca inter-utero-placentaris*). They are not only hypertrophied, but also deformed, being  $\frac{1}{10}$  mm in length, instead of  $\frac{3}{100}$  mm. The greatest number of these deformed cells are lengthened, terminating in one or two irregular points. One or both of these cellular extremities are found irregularly bifurcated. Some of these hypertrophied cells contain two or three nuclei, some only one, and every nucleus has inclosed one or two nucleoli. Besides these cellular formations, may be observed nuclei, very much like those described as cancerous or carcinomatous nuclei. Some of the hypertrophied cells remain as they were in the normal state—finely granulated and transparent, while others are filled with fatty molecules, with a brilliant, yellow centre. Similar transformations are found in the epithelial cells of the uterus in domestic mammalia.

DR. DALTON, after entering briefly into the historical part of the utero-placental anatomy, proceeds to develop his views on the distribution of the uterine vessels, with regard to those of the placenta. In opposition to Dr. Robin's views, he holds that the blood-vessels of the uterus do really penetrate into the substance of the placenta, as supposed by the Hunters, Dr. Reid, and Prof. Goodsir, and that they constitute, with the tufts of the foetal chorion, an equal part of its mass. The placenta is therefore a double organ, partly maternal and partly foetal, and in order to arrive at a distinct understanding of the arrangement of its vessels, a description of the development of the chorion of the foetus and of the decidual membrane of the uterus, is necessary. At first, the villi of the *chorion* are quite simple in form and homogeneous in structure. Afterwards they become ramified by the repeated budding of lateral off-shoots from every part, and the external surface of the chorion presents a velvety appearance. Under the microscope these tufts appear to terminate by rounded extremities, and the larger branches of the villosity are seen to contain numerous oval nuclei, imbedded in a nearly oval homogeneous stratum, while the smaller villosities appear simply granular in texture. The blood-vessels coming from the umbilical arteries ramify over the chorion, and penetrate into the substance of the villosities. They enter the stem of each tuft, and following every division of its compound ramification, they reach at last its rounded extremities. Here they turn upon themselves in loops, to unite finally with the venous branches which empty into the umbilical vein. About the third month the chorion becomes partially smooth. This smoothness, which begins at a point opposite the situation of the foetus, increases in extent, and becomes more and more complete, spreading and advancing over the adjacent portions of the chorion. At the opposite portion of the egg, the chorion is thickened and shaggy, and takes part in the formation of the placenta, while the umbilical arteries enter the villi, forming at the placental portion of the chorion, a mass of ramified vascular loops.

The *decidua* is nothing more than the mucous membrane of the body of the uterus. It consists throughout of minute glandular tubules, ranged side by side. A few fine blood-vessels penetrate the mucous membrane from below, and encircle the superficial extremities of the tubules with a capillary network. A small quantity of spindle-shaped fibro-plastic fibres is scattered between the tubules. The egg, when descended into the cavity of the womb, is embedded in this hypertrophied membrane, and becomes attached to it. The villosities of the chorion insinuate themselves either into the uterine tubules or between the folds of the decidual surface. In this way the egg becomes entangled with both *decidua reflexa* and *vera*, throughout the whole surface. Soon afterwards the umbilical vessels penetrate everywhere into the villosities of the chorion. Each villosity of the chorion, then, as it lies embedded in its uterine follicle, contains a vascular loop, through which the foetal blood circulates. At a later stage the vascular growth, both of chorion and decidua, becomes concentrated at the situation of the subsequent placenta, while elsewhere, over the prominent portion of the egg, the



chorion not only becomes bare of villousities, but the decidua reflexa also loses its activity of growth, and becomes expanded into a thin layer, nearly destitute of vessels.

The placenta, accordingly, is formed by the continued growth at one particular spot of the villi and follicles of the decidua. The uterine follicle enlarges with the villus, which has penetrated into it, sending out branching diverticula. Besides the follicles of the uterine mucous membrane, also the capillary blood-vessels, which lie between them, become unusually developed. At this time, therefore, each vascular loop of the foetal chorion is covered first with a layer forming the wall of the villus, which is in contact with the lining membrane of the uterine follicle; and outside of this again are the capillary vessels of the uterine mucous membrane, so that two distinct membranes intervene between both the foetal and the maternal capillaries. As the formation of the placenta advances, the general anatomical arrangement of the foetal vessels remains the same. But the maternal capillaries become considerably altered; they enlarge excessively and fuse successively with each other, thus becoming dilated into wide sinuses. At this period the development of the blood-vessels, both in the foetal and maternal portions of the placenta, becomes so extensive, that all the other tissues, which originally co-existed with them, fall into a retrograde condition and disappear almost altogether. The villousities of the chorion are now hardly anything more than ramified vascular loops, while the uterine follicles have become mere vascular sinuses, into which the tufted foetal blood-vessels project. Finally, the walls of the foetal blood-vessels having come into close contact with those of the maternal sinuses, become adherent to them, and fuse with their substance, so that the two can no longer be separated without lacerating either the one or the other. The placenta, at this stage, is composed essentially of nothing but blood-vessels of the foetus adherent to the blood-vessels of the mother; the blood of the foetus is always separated from the blood of the mother, which has resulted from the fusion of four different membranes, viz.: the membrane of the foetal villus; that of the uterine follicle; the wall of the foetal blood-vessels; the wall of the uterine sinus. If a villus, from the foetal portion of the placenta, be examined, it will be seen that its blood-vessels are covered with a layer of homogeneous or finely granular material,  $\frac{1}{35}$  of an inch in thickness, in which are embedded small oval-shaped nuclei. This layer is all that intervenes between the foetal blood in the tufts of the chorion, and the maternal blood in the placental sinuses. The anatomical disposition of the placental sinuses is very difficult of examination in the detached placenta, because they are collapsed and apparently obliterated, and the foetal tufts appear to constitute the whole of the placental mass; still they may be satisfactorily demonstrated in the following manner. The uterus of a woman who had died undelivered, near the full term, is opened so as not to wound the placenta; then, after the foetus is removed, it is placed under water, with its internal surface uppermost. Then the amnion has to be removed from the placenta. If the end of a blowpipe be now introduced into one of the divided vessels of the muscular walls of the

uterus, and air forced in, we can easily inflate, first the venous sinuses of the uterus itself, and next the deeper portions of the placenta. If the chorion be now divided at any point by an incision, passing merely through its thickness, the air which was confined in the placental sinuses will escape and rise in bubbles to the surface of the water. Such an experiment shows conclusively that the placental sinuses communicate freely with the uterine vessels, occupy the entire thickness of the placenta, and are equally extensive with the tuft of the foetal chorion. This experiment has been performed by Dr. Dalton on four different occasions. This method has many advantages over that adopted by the Hunters and Prof. Weber, especially because it is infinitely less liable to mislead by producing extravasations.

The opinion of some authorities, that no vascular openings are to be seen on the surface of the detached placenta, corresponding with the mouths of the lacerated uterine sinuses, is explained by the fact that these vessels penetrate in such an extremely oblique direction, that their orifices may easily be overlooked.

DR. LUSCHKA remarks that the walls of a follicle consist, first, of a membrane abundantly imbued with blood-vessels, the stroma of which is a cellular tissue with elastic fibres, and which is separated from the inner epithelium by an amorphous membrane, being attached externally to the stroma of the ovarium by a thin cellular tissue: secondly, of the epithelium—this consists of a great quantity of round or angular cells in the different stages of development; they represent what is called the *stratum granulosum*. These cells are most numerous on that portion of the sac, where the ovulum is situated, which they surround on all sides, so that here a protrusion is formed into the cavity of the follicle, generally called *cumulus proligerous*.

The rest of the Graafian follicle is filled up by a yellowish, albuminous fluid—the liquor folliculi Graafiani. This liquor takes its origin from the cells of the stratum granulosum, as can be proven by microscopical examination of the different stages of development of these cells. First of all a nucleus is formed out of the blastema of the blood, around which molecular matter is deposited, and from which the amorphous wall and the contents of the cell are separated.

The most superficial ones are the most developed. Their granular contents are changed into a clear albuminous substance, from which the cells become larger and pellucid. These fluid contents pass through the walls of the cell in the shape of clear oily drops, which dissolve after some time in water. In this case the cellular wall contracts, to be filled anew. In other instances the entire cell is dissolved, without leaving any trace, or with continuance of the nucleus, which serves for the formation of a new cell. But not every one of the cells participates in the formation of the liquor, some passing into fatty degeneration, some undergoing no change whatever. This fluid is the original blastema from which the ovulum originated; it further serves as nourishment while the ovum is being developed; and lastly, being increased by direct extravasation from the congested blood-vessels during the catamenia, it expands

and finally ruptures the Graafian follicle. The ovum thus set free has to subsist for some days on its own means ; for this purpose it takes along a certain number of those cells which cover it, in the form of what is generally called *discus proligerous*.

DR. FARRE'S treatise on the uterus and its appendages is an important contribution to the anatomy, physiology, genesis, and pathological anatomy of the entire sexual apparatus, with an additional article on the structure and function of the placenta. The amount of researches and facts laid down in these pages is so great, that we must abstain from giving an abstract, recommending the work to every one who takes an interest in the study of anatomy and physiology of the female genitals.

DR. BEALE relates a case of a patient in the eighth month of pregnancy, from whom about seven pints of liquor amnii were drawn off. The specific gravity was 1,006. The deposit was flocculent, and consisted principally of epithelial cells and oil globules from the surface of the skin of the fœtus. A few circular cells, probably derived from the bladder, and some particles of dark green, and brown coloring matter (meconium), were also present. The following was the result of the analysis :

Water.....	987.00
Solid matter.....	13.00
Urea.....	3.50
Albumen and salts.....	9.50

In another case, Dr. Beale found in liquor amnii, drawn from a woman in the eighth month, a number of coats of uriniferous tubes, scarcely half the diameter of those found in the adult.

An analysis of a great number of experiments upon forty living animals, in order to answer the question, What are the causes and the seat of uterine movements ? led DR. SPIEGELBERG to the following conclusions : 1. The stoppage of the circulation, and consequent stasis of blood, is the cause of the peristaltic movements of the uterus. As long as the heart is in activity, there are no movements seen at all, or they are very trifling. 2. Through the nervi vagi no excitations are conducted to the uterus. 3. By irritation of the medulla oblongata, uterine movements can be effected. 4. The cerebellum is the nervous centre which chiefly controls the movements. 5. From every point of the spinal cord, but more especially from its lumbar and sacral portions, movements of the uterus can be produced. 6. The excitations starting from the central organs travel downwards along the medulla oblongata and the spinal cord, and proceed through the rami communicantes of the sympathetic, and through the sacral nerves to the uterus ; and likewise excitations rising from the uterus are produced through the same channel. As to the order in which the uterine contractions follow, Dr. S. believes from his experiments, that first of all the mesometrium begins to contract, in consequence of which the uterus is fixed towards the pelvis ; after this the vagina and the cervix uteri contract ; this circular contraction proceeds up to the fundus uteri, and from thence returning, presses the fœtus downwards, while the cervix and vagina are enlarged.

DR. SAVORY remarks, that although the question as to the possibility of transmitting poisons through the foetal vessels of the cord to the maternal blood, seemed to be settled in the negative by the experiments of Magendie, many physiologists still believe, that the foetal blood commingles with the general mass of the mother's blood; it inoculates her system with the qualities of the foetus; and that, as these qualities are in part derived by the foetus from its male progenitor, the peculiar constitutional vices of the latter are thereby so engrafted on the system of the female, as to be communicable by her to any offspring she may subsequently have by other males. And as, moreover, the nature of Magendie's experiments appeared to Dr. Savory objectionable, he followed another method, which was crowned with affirmative results. His general plan was as follows: By opening the abdomen and uterus to expose and isolate a living foetus; then to inject into it, with the least possible violence, some substance capable of ready absorption, and the operation of which is marked by obvious and unmistakable effects, great care being taken that no trace of the substance came into direct contact with the maternal tissues. The foetus, thus injected, was placed in a condition most favorable for the continuance of the circulation, and symptoms of the operation of the poison upon the mother were carefully noted. The poison Dr. Savory selected was twenty-four grains of strychnia; dissolved in seven drachms of distilled water, by the addition of one drachm of acetic acid. The subjects of his experiments were dogs, cats, and rabbits. Five experiments are reported, from which it seems that proof is no longer wanting, of the direct and rapid transmission of matter from the foetus to the mother through the blood in the placenta.

DR. KIRSTEN detected the presence of sugar in the urine of women in childbed, especially in those cases where lactation had been interrupted. He examined some specimens from women, where puerperal fever had cut short the secretion of milk, or where the children had died soon after birth. The method he used for ascertaining the presence of sugar was, by reduction of the oxide of copper through the watery solution of the alcoholic extract of the urine.

For testing the truth of Dr. Blot's observation, according to which sugar was a natural ingredient of the urine of women in childbed and when pregnant, DR. RIEDEL examined the urine of eleven women in childbed, two of whom had lost their children, and three pregnant women. In none of these fourteen cases was he able to detect the slightest traces of sugar after Trommer's test.

In order to ascertain whether sugar was a constant ingredient of urine taken from women in child-bed, Dr. BRÜCKE tested it on a new principle, viz.: by formation of acetate of sugar, because the other methods hitherto employed seemed to be of doubtful value. In this way he detected considerable quantities of sugar in the tested urine. Still it remains to determine if similar quantities of sugar may not be detected in the urine of healthy men or non-pregnant women. Without having performed quantitative analysis, Prof. Brücke is already satisfied that the increase of sugar of healthy women after delivery is by no means a constant and general phenomenon.

Dr. GRAILY HEWITT remarks that the circumstances preceding or necessarily connected with the act of parturition, which may lead to, or favor the formation of coagula within the veins, are to be found

1. In the *state of the blood* during pregnancy. Its amount of fibrin is increased, the number of blood-corpuscula and the quantity of albumen diminished. This hyperinotic state of the blood of pregnant women predisposes to the occurrence of those puerperal affections of which the so-called phlebitis forms a constituent part, in which coagulation of the blood in the veins is the starting point. On the other hand, women who suffer in a great measure from diminution of red corpuscula (chlorotic women) are very liable to puerperal fever (Scanzoni).
2. Another cause for coagulating the blood is to be found in the mechanical effects of *the pressure of the enlarged uterus*, in consequence of which disturbance of the circulation, favoring stasis of the blood in certain veins, is often observed.
3. The influence of *pressure during the act of parturition*, as performed by the head of the child resting for a considerable time on the brim of the pelvis, in such a position as to retard the venous current, passing from the pelvic organs and lower extremities, be it by protracted labor or by a misproportion of head and pelvis.
4. *Deficient contraction* of the uterus and of the venous plexuses near it, *after delivery*. If the uterus does not contract sufficiently after delivery, the blood contained in the large sinuses stagnates, and a tendency to coagulation of the contents of the vessels is produced.
5. The existence of *physiological coagula*. The formation of these coagula in the orifices of the uterine veins is favored by two circumstances; there is a stasis of blood within the veins, and in many cases exposure of the same to the action of the air. The existence of these normal coagula has no small share in forming the coagulations in the large veins of the pelvis, and parts adjacent to the uterus (Virchow).
6. The *occurrence of hemorrhage* after parturition, because it interferes with the perfect involution of the uterus, or when successfully arrested, after some time, the coagula are loose and less consistent, thus favoring the admittance with the circulating fluid, of those deleterious and septic matters which are occasionally formed on the internal surface of the uterus after delivery.
7. *Certain conditions* of the *internal surface of the uterus* following on parturition, such as mechanical injury to the uterus, inflammation of the internal surface of the uterus (particles of the placenta remaining and decaying in the womb, *E. N.*)

Dr. SAVAGE read a very interesting paper on the erectile and venous system of the female pelvic organs before the Medical Society of London, in which he stated that he had discovered a new structure hitherto not demonstrated, viz.: the bulb of the ovary. This body is inclosed in an unyielding fibrous envelope, an essential contradistinction as regards a mere venous plexus. The bulb of the ovary is a long, compact venous body, extending from the uterus to the ovary, which lies upon and is partially buried in it. Like the bulb of the vagina, it is provided with a special sheath, which establishes its erectile character. The office assigned to this body is that of tending to push the organ itself towards the prehensile extremity of the fallopian tube.

In a discussion which followed upon this subject, Dr. S. allowed that this bulb of the ovary had been described before (namely by Dr. Kobelt; see his work: [*Die Weiblichen u. Männlichen Wollustorgane*, 1843]); but its character as an erectile organ had not been pointed out before he (Dr. S.) had mentioned it.

After a full and scientific exposé and a literary review of the facts concerning the anatomical structure of erectile organs, Dr. Rouget comes to the conclusion, that there are three constituents necessary for tissues of an erectile character, viz.: arteries with a spiral course, vast venous reservoirs, and muscular trabeculæ. For the womb it is very easy to demonstrate the presence of these three elements, while it remains to analyze their mutual relation, and show that the number of vessels is larger than is required merely for the process of nutrition, and to prove that changes of volume, shape, and position are effected by the distension of these vessels.

The utero-ovarian artery, does not distribute its branches equally upon all portions of the womb. While near the neck of the womb its ramifications are few in number, and run in a pretty straight line, it divides abruptly near the fundus into a dozen or eighteen tortuous branches, so numerous and so much pressed against each other, that they cover entirely the lateral angles of the fundus uteri. Towards the inferior margin of the ovary the utero-ovarian vessel furnishes a series of a dozen branches, which start in rapid succession from the upper border of the artery, and in ramifying close to their origin, directing their tortuous course towards the ovary, where they form also spires. The venous system of the womb is so much developed, that it looks, even uninjected, like a real sieve in many specimens. These masses of venous sinuses, when empty, give no idea of what they really represent, when fully developed by a complete injection. If this vascular system is separated from the intervening muscular stratum (by nitric acid) the erectile system of the body of the uterus, and below the ovary becomes distinct. This erectile body represents the exact form of the fundus and body of the uterus, stopping short suddenly near the orificium internum (anatomic.). Independently of the uterine sinuses, the erectile mass is formed of twisted and almost spiral venous canals, like those of the corpus spongiosum penis. Near the angles of the uterine body the arteries are so numerous that they form here the greatest portion of the vascular system. Immediately below the ovary there is a real corpus spongiosum, an erectile vascular tissue, containing spiral arteries, venous tissues, and muscular trabecula. The corpus spongiosum (bulbus) of the ovary is elongated and flattened, exceeding somewhat the long diameter of the ovary, while it is about 1<sup>cm</sup> thick, and a little more than 1<sup>cm</sup> high.

These are the only erectile organs inside the female pelvis, the vessels of the tuba Fallopii not having the character of erectile organs. While injecting the vessels of the tube, no change of form or size, nor any movement whatever was observed, quite different from what was seen in really erectile organs. Nor have the walls of the vagina anything characteristic of erectile organs; its arteries are even not spiral, while its venous system consists of a very thin vas-

cular network. Only the plexus of large veins running along its lateral borders, and a vascular ring near its orifice, form a kind of erectile body capable of being changed in form and size.

The erectile character of these portions can be demonstrated by artificial erection, viz. : by immersing a fresh pelvis, with its contents, in warm water, and injecting the ovarian veins. As soon as the injected mass begins to fill the vessels, the erectile portion of the body of the womb is elevated in the cavity of the pelvis, performing a movement like that of the penis in erection. At the same time the uterus becomes more convex in front and behind, its borders round and smooth, while the cavity of the womb is enlarged. The ovary is somewhat elevated by the injection, while the tubes remain unchanged in their position.

It remains to discuss the mechanism of this erection. In the womb this is easily demonstrated. The muscular borders of the uterus have the same rapport with the venous network, as the trabeculæ of the corpus cavernosum with its sinuses ; the same cause, muscular contraction, must produce the same effect, viz. : the retention of the blood in the sinuses. But in the corpus spongiosum of the ovary it seemed to be impossible to bring it under the same law. An independent muscular tissue was nowhere found.

Dr. ROUGET has found, by the study of comparative anatomy, that a muscular apparatus performs the expulsion of the egg from the ovary, and its progress towards the tube. The sexual organs of the lowest class of vertebrated animals (fishes) present two different types. In some of them the egg, when detached from the ovary, falls into the peritoneal cavity, which is lined by vibratile epithelium, and communicates externally by the way of particular orifices. But the greatest number of osseous fishes have a genital apparatus, similar to that of articulated animals. The eggs are developed upon the walls of a special cavity, or sac, having a direct external communication. Glands constructed on this principle are covered with a muscular layer. In the vertebrated animals and in the higher order of fishes, a special duct exists for transmitting out of the ovary the products developed in it, and this meatus is sometimes situated a considerable distance from the ovary.

But the muscles covering these reservoirs and channels do not exactly fit their shape, just as the muscles of the *intestinum crassum* and of the seminal vesicles, do not follow the figure which their uneven shape requires. Another general law, pertinent to these organs, is that the terminal extremity of the organic muscles is always connected with some portion or other of the locomotive apparatus of the animal system, such as bones, muscular aponeuroses, tendons, or the body of muscles themselves.

After a short analysis of the anatomical structure which forms the tubo-ovarian muscular apparatus of the fishes, reptiles, and birds, Dr. Rouget proceeds to describe that of the mammalia. As a sample is taken, the disposition of these organs among the ruminants, and that of the goat, is more particularly described.

The body and the cornua of the uterus are situated in the middle, the tubes and ovaries in the lateral portions of a large membrane,

which, spreading in a transverse direction through the pelvic cavity, is attached by its two anterior extremities to the superior dorsal wall of the abdomen, by its two inferior and posterior extremities to the ventral wall. Throughout this membrane, even in its most transparent portions, the microscope reveals an extensive distribution of muscular elements, a fact hitherto entirely overlooked by anatomists.

The middle section of this membrane is really nothing but the external layer of the muscular envelop of the uterus. In the median line of this membrane it is easy to distinguish a decussation of the muscular bundles from one side to another. The bundles which come from the lumbar region, the superior of which, condensed towards the free border of this membrane, are called *ligamentum rotundum superius*—descendent towards the cornua and the body of the uterus, and envelop the tube and the ovary in their course. Meeting at the median line, they cross each other with those of the other side, and in continuing their course, they are divided in three different sections; the inferior ones run backwards towards the rectum and the anterior surface of the sacrum (*ligam. recto-uterin*). Those of the middle portion seem to connect themselves with a portion of bundles of the *ligam. rotund. pubicum*. The superior ones run towards the lateral portion of the basin and the symph. *sacro-iliaca*. It is the latter section which seems to receive a muscular bundle, which forms the superior border of the *ligam. triangul. ovarii*, and which, in passing above this organ, contributes to the formation of the muscular cord, which does there attach the ovarian fringe of the pavilion.

The *ligamentum pubis rotundum* is generally described as a muscular cord, which, coming from the *spina pubis* and from the *labium majus*, runs towards the *cornu uterinum*, or the superior corner of the womb. But this is, in reality, not the case. It is perfectly wrong to separate it from the neighboring portion of the *ligamentum latum*, with which it is in intimate connection. From the point where this ligament touches the anterior abdominal wall, it constantly sends forth muscular bundles, which spread fan-like over the entire anterior surface of the womb. After traversing the median line, those bundles, in an ascending direction, unite with the *ligamentum latum* of the opposite side; a certain portion of them forms the inferior board of the *ligam. triangular. ovarii*, and reach the *ala vesperilionis* of the tube.

The superior bundles of the round ligament form, by their "entrecroisement," the muscular membrane which unites the uterine cornua, from whence they spread towards the *ala* of the tube. With this system are combined the greatest portion of the *plicæ semilunares Douglasii*, and of the *ligamenta utero-sacralia*, which embrace the neck of the womb and crossing at the median line, combine with the opposite *ligamentum latum*.

But, besides this "croisement" in the median line, there exists an antero-posterior *entrecroisement* in a line with the lateral borders of the womb and the cornua, while there is another muscular system, which remains only on one side throughout its course. This dis-



position is represented in different degrees of development in all classes of the mammiferous animals.

All these muscular strata, as found among the different classes of animals, may be easily detected with some modifications in the woman. In order to establish the true anatomical character of the so-called peritoneal folds in the female, a portion taken from their outer layers must be kept for a few days in diluted (1 : 100) nitric acid, and afterwards, with the addition of four more drops of the acid, heated to commencing ebullition, by which process the intervening tissue is destroyed, while the muscular fibres may be easily recognized under the microscope. The best occasion to examine the disposition of the sexual organs in the human female is not the time of pregnancy, but that of foetal life and childhood. The uterus, with its appendages, taken from a young girl and examined with the loupe or under a small magnifying lens (from 20 to 200 diam.), after it has been wet with a solution of nitric acid (1) in water (100), offers the best means of recognizing, that at this time of life the human organs resemble, in many respects, those of the goat. The bundles coming from the round (pubic) ligament are fan-shaped, and spread over the entire length of the uterus, crossing in the median line those coming from the opposite side. Those bundles which are in connection with the ovarian ligament (mesoarium), are mostly derived from the posterior surface of the uterus. Descending from the superior and ascending from the inferior portion, they run in a convergent direction towards the ligamentum ovarii; but being only more numerous at this point, they occupy the entire space of what is called, the serous, or rather the muscular membrane, on which the ovary is suspended. The bundles, interspersed with numerous oblong nuclei, which enter into the construction of the stroma ovarii itself, and inclosing the graafian follicles in their meshes, are very likely nothing but a continuation of those from the ovarian ligament (mesoarium), a fact well established in the ovary of the reptiles and birds. Besides, it is easy to find out, that a considerable portion of the bundles of this pretended ligament, proceed towards the inferior border of the ovary, entering, at its exterior extremity, into the composition of the muscular membrane, by which the pavilion of the tube is attached to the ovarian gland. The general fact of the ovary, the fallopian tube, and the uterus being enveloped in a common muscular membrane, is very important, more especially with regard to the connections established by these contractile fibres, between the ovary and its excretory duct. These connections result essentially from the double irradiation of the utero-ovarian and the ovario-lumbar ligaments in the membrane which connects the ovary with the trompe. It is easy to perceive that, by a contraction of these muscular bundles, the tube and its orifice are approached towards the ovary. The length of the peritoneal expansion (free border of the mesometrium), spread out between the ovary and the tube, allows the pavilion to reach the remotest portions of the ovary. This disposition counterbalances the small extent of the opening of the tube, which scarcely covers one-third of the surface of the ovary. It is nothing but muscular activity, which forces the pavilion to adapt

itself just to that particular spot of the ovary, where the follicle is ready to break. The direction of the two orders of muscular bundles, attached at the lumbar region and at the uterus itself, comprises the full length of the tube and its peritoneal extremity, and sufficiently explains the mechanism of the movement of the tube towards the ovary. The whole question is reduced to that of the mechanism, by which a purse is closed by strings, going across its free border.

These muscular expansions are not only destined to approach the tube to the ovary, but inclosing at once the large venous plexuses of the *bulbus ovarii* and those called *plex. pampiniformis*, they do complete the erectile character of these spongy tissues, thus rendering the similarity between the male and female organs more perfect. The erection of the spongy tissue of the uterus is immediately followed by uterine hemorrhage. It is a fact that the body of the uterus always has been found swollen, full of blood, more voluminous in women who died during menstruation. The erection itself results from a muscular spasm, which prevents the reflux of blood through the *sinus efferentes*. Therefore, ovulation, uterine erection, and menstruation have one and the same fundamental cause, viz., muscular contraction. The adaption of the tube to the ovary precedes the dehiscence of the vesicle, which lasts sometimes for eight or ten days after the beginning of the rupture of the follicle. All this time the tube can only be retained close upon the ovary by a spasmodic contraction of the muscular layers which produce the adaptation of the tube to the ovary. But, at the same time, the venous sinuses which are inclosed in this same muscular mesh-work, must necessarily undergo a partial compression, the result of which is the distension and erection of the *bulbus ovarii*. The accumulation of blood around and in the ovary must be of influence for the more rapid development and maturation of the ovulum. These modifications in the circulation of the ovary do of course bring about a similar change in the uterus itself, the uterine and ovarian sinuses being in direct communication with each other. Both organs, therefore, are placed in a state of erection by the same cause. If the erection of the ovary is not followed by a hemorrhage, this is owing to the *tunica albuginea* and the thick stroma of the ovary itself. But, in some abnormal instances, the ovarian erection may cause a hemorrhage, and this is certainly the most frequent origin of retro-uterine hematocoele. The theory of the act of ovulation is exactly the same as that of the act of parturition, vomiting, and micturition, etc. As soon as the graafian vesicle has arrived to a certain degree of development, the distention of the structures, which constitute the stroma, is the exciting point of a reflex action, which is propagated from the centres of the sympathetic nerve to the whole muscular apparatus of the internal genitals, to the mesoarrium and to the mesometrium. But the ripening of an ovulum is not the only cause of the phenomena just described. No doubt sexual intercourse does very often produce a real, though transient erection of both uterus and ovaries, and may, therefore, if often repeated, call forth more frequent menstruation and ovulation. (In reading over Dr. Rouget's article, we were struck as well with the novelty of the ideas present-

ed, as with the ingenuity of the experiments performed, and the vast amount of knowledge developed in these pages. We cannot speak too highly of this thesis, and we desire to urge our readers to a perusal of the original article.—*E. N.*)

Dr. LEE, in analyzing a number of cases of tubal gestation, stated that in all of them the egg was surrounded by a deciduous membrane, which closely adhered to the inner surface of the tube, while no decidua could be detected in the cavity of the womb. In most of the specimens exhibited, Dr. T. Clarke thought to find just the reverse, viz., a decidua in the uterus, and no deciduous formation in the tube. Still he admitted that in some cases a real decidua was formed in the tubes. Dr. Tyler Smith thought it but natural, that the mucous membrane of the tube was transformed into a deciduous membrane, while the lining membrane of the uterus was developed to such an extent as to resemble a decidua. Dr. Locock fully agreed with Dr. Smith's opinion.

### III.—PHYSIOLOGY AND PATHOLOGY OF PREGNANCY, LABOR, AND PUERPERAL STATE.

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— *The Sudden Death of Women in Childbed*. By A. E. Mordret, M.D., etc. Prize Essay of the Paris Academy of Medicine, etc.
48. Marc d'Espine *on the Frequency of Death among Pregnant and Delivered Women and the Influence of General Causes upon this Accident*.—Gaz. de Paris, 19.
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- *Sudden Deaths of Pregnant and Recently Delivered Women.* By E. Moynier, M.D. Prize Essay, etc.
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The work to which we would direct the attention of our readers more particularly among the numerous contributions to obstetric pathology, is that of Dr. Schwartz on the influence of labor upon respiratory movements of the fœtus in utero, which is equally important from a scientific as from a practical point of view. From France we have received Dr. Mordret's elaborate treatise on sudden death of puerperal women, to which a prize has been accorded by the French Academy of Medicine. This article touches upon the important question of entrance or development of air in the blood, an accident which occurred, as we have reason to believe, in Dr. Elliot's interesting case, mentioned below. The most important contribution from England is Dr. Davis's "illustration of difficult parturition," a faithful guide in the time of need for the practitioner and the student.

DR. HECKER subjected 2593 pregnant women to an examination, in order to test the correctness of the generally current opinion, that the permeability of the internal mouth of the uterus, was a sure sign of approaching labor. But of this number 946 presented an internal orifice sufficiently open for the passage of the forefinger; 723 were multiparous, and 223 primiparous women. In every instance the time of examination and that of beginning labor were noted. By a comparison of these, the value of the rule, as named above, was not materially changed, with this restriction, that only in 60 out of 100 primiparous

women the open condition of the os can be taken as a sign of labor in the next few days, and that only in 70 out of 100 multiparous women with open os, delivery was not delayed longer than fourteen days after this condition was ascertained. These results show how careful we have to be in our prognosis with regard to beginning labor : especially if we consider the fact that 6 out of 100 primiparous women presented on examination an open internal orifice, although they were only 9 (lunar) months pregnant, while the same was observed in ten per cent. of the multiparous women.

After the researches of DR. SILBERT, children born after protracted gestation are unduly developed, and he therefore proposes induction of labor at the end of the full term, whenever gestation is suspected to be protracted.

DR. HEWITT reports the case of a lady who menstruated regularly every fourth week, and did not miss her courses in three successive pregnancies. The discharge continued to appear every fortnight, though of a paler color.

DR. CAZEAUX thinks that ulcerations of the cervix are very frequently found in multiparous women, during the latter part of pregnancy. He has observed them in seven-eighths of the cases, confining this statement to the last third of pregnancy. This, therefore, seems to be the normal condition, and should be considered as a consequence of the progress of gestation, owing to the excessive congestion proper to the pregnant state. Consequently all treatment with regard to them is unnecessary. Corresponding with this view, is the fact that five or six weeks after delivery, no traces remain of these ulcerations.

In regard to the statements of Boys de Laury, Bennet, and others, as to the frequency with which abortion and various puerperal causes are produced by ulcerations, it is of importance to distinguish between ulcerations that have preceded pregnancy, and those which have only become developed after the formation of the germ. Cazeaux doubts the justice of Bennet's statement, that these ulcers are a frequent cause of obstinate vomiting in pregnancy. He has had the opportunity of examining four primiparæ, reduced by vomiting to the last stage of marasmus, in whom the cervix remained perfectly healthy.

DR. CLAY reports three cases of women who after having miscarried several times, underwent a mercurial treatment before the next pregnancy, in consequence of which all three gave birth to full grown living children. In the third case mercury was first given during pregnancy, but the woman miscarried as usual ; after this, she, as well as her husband, began to take mercury before she conceived again, and she carried her child to the full term.

DR. MARCE thus concludes an interesting paper illustrated by cases.

1. We cannot protest too strongly against the practice of those physicians who advise or allow pregnancy in insane women, for it results from the facts mentioned in this paper that, in the great majority of cases, pregnancy and delivery, so far from exerting a favorable influence on insanity, seem on the contrary, to hasten the progress of the disease towards dementia. If in certain exceptionable

cases (2 in 16) pregnancy has suspended the progress of the disease, the improvement has been only temporary, and the insanity has reappeared after delivery. 2. In some few cases (4 in 16) remarkable especially for the predominance of erotic symptoms, pregnancy has exerted a beneficial influence on the cure. 3. When insanity becomes developed during pregnancy, it very often remains incurable, even after delivery, or is cured so long after, that no influence can be attributed to the latter in the termination of the nervous affection. 4. Sometimes, however (3 in 10 cases), the disease disappears after delivery, and these cases must be regarded as sympathetic. 5. Delivery in the insane is often remarkable for the slight amount, or even complete absence of pain.

The opinions of the different authors, who have paid attention to the navel-string souffle being divided, as to its true seat and nature, Dr. SCHMIDT feels justified in the publication of five instances of this phenomenon, perceived before the child was born, out of 500 obstetrical cases, all of which were thoroughly examined with the stethoscope.

*Case 1.*—The child was born in a state of asphyxia, and could not be revived. The autopsy was performed by Prof. Virchow, who found a decided hypertrophy of the right ventricle of the heart, insufficiency of the valvula mitralis et tricuspidalis, and a deposition of several red, gelatinous corpuscula on both valves.

*Case 2.*—When the head of the child was born, the navel-string was found twisted around the neck twice, and so strong, that the vessels of the neck were compressed, in consequence of which, the face had a cyanotic color. The child died after a few short inspirations.

*Case 3.*—The sounds of the foetal heart were heard clear and distinctly, immediately before the rupture of the amnion. When the water had been discharged, a prolapsus of the umbilical cord was discovered, upon which the head of the child was pressing with considerable force. Auscultation applied at this moment, discovered not the former sound of the foetal heart, but instead, a souffle, which disappeared as soon as the prolapsed string was removed into the cavity of the womb.

*Case 4.*—The sounds of the foetal heart were accompanied by a strong souffle. Still, when the child was born, the navel-string was not twisted round the neck; the child was healthy, and the sounds of his heart found in good order.

*Case 5.*—Instead of the first sound of the heart a souffle was detected by auscultation. When the head was born, the umbilical cord was found tightened around the neck. The child was asphyxiated, and it was half an hour before it could be declared out of danger.

From an analysis of these cases, Dr. Schmidt comes to the conclusion, that the so-called umbilical souffle may take its origin: *a.* From diseases of the foetal heart. *b.* From circumvolution of the umbilical cord around the neck of the child. *c.* From other compressions of the navel-string depending upon the position of the child.

In regard to the practical value of the funic-souffle, Dr. Schmidt is of opinion, that its presence, in most cases, indicates danger to the life of the child.



Dr. McSHERRY reports a case of delivery, at the full term, of a putrid child, in a case of cancer of the womb; the patient died soon afterwards. The author proposes the Cæsarian operation in far-gone cancer of the pregnant womb, in order to shorten the sufferings of the mother and save the life of the child.

Dr. SHEDD reports a case of labor without pain, and one interesting case of hydrorrhœa uteri with enormous discharges of water during pregnancy.

Dr. HOUGHTON reports a case of shoulder presentation, which terminated by spontaneous evolution. The vehemence of uterine contraction prevented the intended operation of turning, and could not be checked by chloroform. The author wonders why chloroform did not subdue uterine contraction.—It is a well-known fact, that uterine activity, as well as that of all organic muscles, is very little influenced by anæsthetic agents.—E. N.

Dr. ELLIOT gives an account of several cases of difficult labor, some of which are apt to excite the liveliest interest of the profession; above all, the case of Mrs. E., is an unicum in its way, thus justifying a somewhat lengthy analysis. Mrs. E. exhibited already during gestation unmistakable signs of existing morbus Brightii, so that Dr. Elliot put her under a rational treatment, in order to avoid, if possible, the occurrence of puerperal convulsions during delivery. When the first pains set in, it soon became manifest, that the os uteri was so unyielding, that the warm douche was thought necessary to overcome this obstacle. But the os remained as undilatable as it had been for twenty hours. Therefore the cervix was divided with Simpson's uterotome, and the long forceps applied, by which Dr. Elliot succeeded to deliver a living female child. After all was over, the mother seemed to be doing very well, when suddenly an alarming change came on in her expression, pulse, temperature, and respiration. The last was slow, jerking, and abdominal; the pulse exceedingly feeble and slow; the face and extremities very cool; the uterus remained well contracted, no hæmorrhage occurred. This alarming condition was successfully removed by the use of stimulants, and she had some refreshing naps, when suddenly a similar change to that of the previous night came over her. She became extremely restless, throwing herself completely on her right side, raising herself on her heels and shoulders, and died immediately afterwards. The body was kept in a room without fire, and the windows open, the temperature being near the freezing point.

*Post mortem examination 27 hours after death.*—The face was greatly swollen by emphysema and the surface of the body down to mid-leg, and to the wrists, crepitated in the most marked manner; post mortem lividity over the back, and greenness of decomposition, with bullæ over the lateral aspects of trunk. On opening the abdomen, there was an unusually great escape of gases; interior of the body yet warm. Both *pleuræ* universally adherent, nothing of interest in the lungs. *Heart* of normal size, apparently fatty with patches of atheroma along the aorta; no clot in pulmonary artery. *Pericardium* normal. Blood coagulated. *Abdomen*: No peritonitis, subperitoneal cellular tissue everywhere emphysematous. On

greater curvature of the stomach, cellular tissue around gastro-epiploic vessels, so aerated as to simulate distension of vessels. The intestines crepitated everywhere from emphysema of their subperitoneal cellular tissue. *Liver* crepitated everywhere to the touch, and was so friable, as readily to break down in the necessary manipulations for removal. *Spleen*, with similar crepitation. *Kidneys* excessively soft, crepitating to the touch; their capsules dissected by the emphysema. *Uterus* firmly contracted and emphysematous; displayed two subperitoneal fibrous outgrowths, which were diagnosed during life; no appearances of sphacelus nor of laceration extending to the peritoneal coat were observable; cavity contained a small clot of blood. Microscopical examination conducted by Drs. Clark and Isaacs. The numerous whitish spots on surface, and in muscular tissue of the heart, consisted of granular matter, with globules of oil. *Liver* fatty. *Kidneys* far advanced in Bright's (fatty) degeneration. Dr. Elliot in the adjoining remarks, ascribes the sudden death, in this instance, to an effect of the existing disease of the kidneys. Lastly, Dr. Elliot remarks, that the entire literature, as far as it was in his reach, did not contain a case of post-mortem decomposition of the same extent, or equal rapidity. Added, are a number of interesting obstetrical cases, under the following heads: *Case*.—Woman deserted by her physician; child dead; uterus distended with gases; version; death.

*Case*.—Tedious labor; Forceps; Safety to mother and child; Novel views of uterine hæmorrhage.

*Case*.—Neglected transverse presentation; version; death.

*Case*.—Deformed pelvis; Forceps; Death from perforation of uterus by sacral promontory; child died two days after from apoplexy.

*Case*.—Forceps; Puerperal fever; Bronchitis; Death from uterine hæmorrhage, eleven and one-half days after delivery; child did well.

*Case*.—Hysterical convulsions and hemiplegia.

*Case*.—Puerperal mania.

*Case*.—Forceps; Puerperal fever; Death; No autopsy.

Four *Cases* of; Puerperal fever; Recovery; (Morphium and Tr. Ver. viridis treatment).

*Case*.—Puerperal fever; Death and Autopsy.

*Case*.—Puerperal convulsions; Recovery.

*Case*.—Rigid os; Douche; Forceps to head transversely placed in pelvic excavation; Mother recovered; child dead before delivery.

*Case*.—Rigid os and lingering first stage; Douche; Forceps; Mother recovered; Child died on third day from other causes.

*Case*.—Arrest of head by promontory of sacrum; Forceps; both did well.

*Case*.—Forceps in superior strait; both did well.

This is quite a number of interesting cases, illustrating better the rules to be followed in practical midwifery, than volumes of theoretical treatises. Dr. Elliot, in advocating the douche for the management of a rigid os, strongly recommends never to neglect manual dilatation afterwards. Many of the cases in which the douche is supposed to have failed, come within this category, the os preserving

the same dimensions, and the same deceptive feel of rigidity which originally motived the douche, but now yielding to the dilatation of the fingers, as brown paper would do when wetted.

DR. IRVINE'S case of superfoetation is of no value whatever. The first foetus born was of a four months growth, which is certainly nothing but a twin-child, which died when four months old, and was compressed by the growing second child, without being decomposed. Nothing is mentioned about the formation of the uterus.

Mrs. J. B. was taken in labor and attended by Dr. JONES, at the expiration of her third pregnancy ; after fifteen hours of pain, she was delivered of a male child, and about ten minutes afterwards, the membranes of a second foetus began to come down. On this being ruptured, both feet ascended low in the vagina, when Dr. Jones grasped both legs high above the ankles, and waited for the return of an expulsive pain, which soon coming on, Dr. Jones began to make some traction. But the legs were forcibly drawn from his grasp, until they quite passed above the pelvic brim, and their place then became occupied by the head, which soon descended (face to the sacrum) and the labor was rapidly completed.

DR. HEISE attended a lady in her confinement, during which, after the discharge of the water, the uterus became suddenly enormously extended and very painful, while the patient became excited and feverish. Though the pains were pretty strong, the labor did not advance any, and Dr. H. recognized a constriction of the internal uterine orifice round the neck of the foetus, which seemed to yield after external application of extract of belladonna, for the head of the child now advanced and was finally born, during and after which a great quantity of a stinking gas was discharged with a gurgling noise from the uterus, while all the distressing symptoms left the patient immediately. The child was macerated, and the doctor explains the sudden and unusual dilatation of the uterus from the development of gases, originating from the contact of the dead foetus with the atmospheric air, after the rupture of the membranes, while their escape was prevented by the ensuing constriction of the orifice of the uterus around the foetus.

DR. HALL DAVIS'S book deserves the greatest attention of the profession, being the result of a more than twenty years' observation in private and hospital practice. The book is divided into two parts, the first dogmatical ; the second illustrative. The former opens with a short introduction, pointing out the causes of obstructed labor, and generally indicating the principles upon which such difficulties are to be overcome. The second chapter contains strictly practical matter, treating mostly of difficult forceps deliveries. The author does not approve of Dr. SIMPSON'S proposition of turning instead of using the long forceps in cases of contracted pelvis. Next follows the subject of premature labor and of craniotomy. He ascribes the fatality and evil results of the latter to neglect of not sufficiently reducing the bulk of the head and other hard parts. Face and breech presentations are next treated in their particular bearings. With regard to the use of chloroform, he thinks that it produces, in most cases, the necessary relaxation, while at times it failed

in effecting that object, although the patient was reduced to perfect unconsciousness. In some instances it appeared to have predisposed to hemorrhage after delivery, the uterus being left in a state of inertia. The second portion of this book contains, besides, a great number of very interesting and valuable cases. From the statistics given in the appendix it appears that the mortality among 7302 mothers, who came under Dr. Davis's notice as patients of the charities, to which he is attached, only amounted to sixteen. The book altogether is a real English one, having throughout a practical tendency, and being written in a style plain and to the point.

DR. PORTER read a very elaborate and scientific article on meddling midwifery, before the New London County Medical Association. He advises the cautious use of the tampon in abortion, not, of course, its disuse. He speaks of unnecessary venesection in pregnancy, not denying that it may be properly resorted to in many cases. He further dissuades from unnecessarily converting one presentation into another, if not imperiously demanded. The same is true in regard to rupturing the membranes, to management of nates presentations, and to the dilatation of the os uteri.

DR. GARDNER, when speaking of rigidity of the os and its treatment, strongly advocates mechanical dilatation by sponge tents, incision and the blades of the forceps in cases of need, where internal remedies have failed to overcome its resistance.

DR. MOORE's paper, read before the Tennessee State Medical Society, is an account of six complicated obstetrical cases, which were successfully treated by internal medicines, or by turning. The article is written against the spreading use of the forceps and the perforator, in this country.

DR. GRAY recommends to irritate the nipples as soon as labor pains come on, and continue the stimulation as long as it lasts, in order to increase the action of the uterus.—The same has been proposed and executed by Scanzoni.—E. N.

DR. GAUTIER's volume on uterine rheumatism is intended to represent a complete description of the rheumatic affections of the womb; therefore, the author comprises in his description the disease generally denominated neuralgia uteri, which he believes to be of a rheumatic nature. The book contains a considerable number of clinical observations upon which the following conclusions are based: 1. The disease described as irritable uterus, uterine neuralgia, etc., is of the same nature, and offers the same symptoms, as that, called by some authors, rheumatism of the uterus in its empty state. 2. This same disease is observed at the time of pregnancy, from the second month up to the end of the ninth. 3. This affection has been generally described as uterine rheumatism, when it was observed during pregnancy; but its nature does not differ at all, from that of hystericalgia in the non-pregnant uterus; it, therefore, would be just to unite both affections under one designation. 4. Inasmuch as this disease represents all the characters of a muscular rheumatism, the name of rheumatism of the uterus ought to be retained. 5. Those affections described as erethism, hyperæsthesy, convulsibility, trismus, tetanus, cramps, spasmodic contractions, etc., of the womb, are all

nothing but varieties of uterine rheumatism in their primitive form. 6. Rheumatism of the uterus does appear with the same symptoms, in the non-pregnant state of the womb, during pregnancy, during labor, during and after delivery. 7. Rheumatism of the uterus is not a simple inflammation of the uterus, nor an endometritis. Both differ from each other in the respective symptoms, course, and duration. 8. Rheumatism of the uterus during pregnancy and parturition, is not dangerous for the mother; if death follows, this is owing to a complication. 9. Rheumatism of the uterus is at times a cause of danger or even death for the child. 10. The principal remedies for uterine rheumatism during pregnancy, are opium and tepid baths. 11. Inhalation of chloroform is the principal remedy for rheumatism during labor. 12. From the identity which exists between hystericalgia and uterine rheumatism, it is reasonable to assume the identity of muscular rheumatism and neuralgias in general.

Dr. BRAUN says: Hydrorrhœa is a periodical discharge of a yellowish, sero-albuminous fluid from the genitals of pregnant women, which is unconnected with the rupture of the membranes, or the discharge of the amniotic liquor. Hydrorrhœa seldom occurs before the third month, but generally at a more advanced stage. It may appear only once, or more often, sometimes imitating the menstrual types, ceases generally after delivery, or continues in a few instances for a length of time during the puerperal state. In consequence of the red color of the fluid, the hydrorrhœa has been often mistaken for a menstrual discharge of blood. Dr. Braun believes that the hydrorrhœal fluid is a secretion or rather albuminous exudation of the inner surface of the womb, which appears in an intermittent typus, elevating a portion of the chorion from the decidua, or the latter itself, thus forming a reservoir for the fluid, from which it escapes occasionally through the mouth of the uterus. Similar albuminous discharges have been observed in the non-pregnant state, especially when fibrous tumors were in the cavity of the womb. Another proof that Dr. Braun's views are perfectly right, is the fact that after delivery the foetal membranes are found intact, and that the quantity of liquor amnii is not lessened in cases of hydrorrhœa. The microscopical examination of a placenta expelled after hydrorrhœa, detected a recently formed membrane of cellular tissue on its convex surface.

In a paper—read at a meeting of the Cork Medical and Surgical Society—Dr. HARVEY reports a case of hydrorrhœa uteri gravidi, and gives it as his opinion, that the water discharged in similar cases, comes from the amniotic cavity, owing to occasional solutions of continuity, admitting of discharges from time to time, which either close again, or admit refilling to a certain extent, by a fresh secretion of its peculiar fluid.—It would be too lengthy to prove on this occasion, that Dr. Harvey is entirely mistaken with regard to the explanation presented. Suffice it to say, that our experience in this matter leads us to agree with the views taken by Mr. Braun.—E. N.

Dr. BROWN reports a case of a very large thrombus of the vagina, formed after a severe fall on the back, one day before delivery, which suddenly increased after confinement, to an enormous size. The case

resulted successfully by hourly application of gallic acid, in simple doses, combined with the use of strong anodynes.

Dr. BERZ remarks, that the cause of afterpains is not always to be found in a pathological condition of the womb itself. At times the situation of the womb after delivery is such, that it presses against a part of the bones which form the entrance of the pelvis ; in this instance the patient must be brought into a position which enables the womb, to move away from its former place to a more harmless location. Added is the history of a case, where afterpains originated from the fact, that the uterus by its peculiar position exerted a pressure upon the left horizontal pubic bone ; the womb was removed from the os pubis, whereupon the afterpains disappeared.

Dr. CRITCHER examined the eye of a patient, who had suddenly lost sight of the right eye, and found that a filmy, colored membrane of considerable size floated in the lower half of the eye, at a little distance from the retinal surface. Only one-half of the entrance of the optic nerve could be seen, the other being covered from view by a crescentic patch of what was probably extravasated blood.

Dr. SCHWARTZ's work on early respiratory movements of the foetus, is one of the most elaborate and scientific researches we have met with for years. The much contested question of foetal respiration in utero is discussed in a more thorough manner, than it has been done up to the present time, developing quite new and well supported views on the vital connections between mother and child. The discussion opens with a full historical sketch of the treatises published, regarding the different points in question, and in a few preliminary remarks the subject to be inquired into, is laid open to the reader. The author's intention is to show the intimate connection between a disturbed foeto-placental circulation during the physiological or pathological progress of labor, and respiratory movements of the foetus, with all its bearings upon theory and practice of every day's and of legal midwifery. If this connection should be proven to be a law, then the very act of parturition bears in itself the danger of suffocating the foetus, and death of the child during delivery must be considered as death by suffocation. These considerations constitute the turning point of Dr. Schwartz's thesis, the elements of which are treated in the following manner : He first proceeds to reconsider the doctrine of placental respiration, which he endeavors to strengthen by conclusions, based upon the physiological manifestation of intra-uterine life. After this he intends to show, by direct observations, that the next consequence of interrupted foeto-placental respiration was the beginning of respiratory movements of the foetus. Next is considered the influence of the act of parturition upon the early respiratory movements of the foetal thorax, and further on the post mortem appearance of children, who died during or shortly after birth, compared with the respective process of delivery, by which their death was caused.

The question of foetal respiration in utero is far from being decided in one or the other way. The opponents considered a foetus in utero as part of the mother, attributing to it only an indirect respiration, such as every single member of the body has its capillary respira-

tion, inasmuch as it receives an oxygenized blood, for which carbonized blood, with the ashes of nutrition, is exchanged. But Dr. Schwartz holds that the fœtus lives a life for itself, with its own sanguification, its own peculiar nutrition, and its own respiration, *i. e.*, the fœtal blood discharges in the placental capillaries carbonic acid, and there receives oxygen, which it discharges in the capillaries of its body for the former gas. For proving this the author follows a double way, first showing the effects of respiration for the fœtus, and secondly, the influence of a suspension of this presumptive mode of respiration. After the researches of competent men, the blood in both the umbilical vein and arteries exhibits no difference in color, not because the want of oxygen for fœtal life is so trifling, that its minute quantity is insufficient to brighten the coloration of the blood, but because we are unable to get at the blood contained in the umbilical vessels, without disturbing previously the uterine and placental circulation, by the manipulations necessary for this experiment. This same circumstance explains the impossibility of finding different gases in the different umbilical vessels. Therefore, another way must be followed, to prove the reception of oxygen by the fœtus. Oxygen is an indispensable requisite for the formation of uric acid, and especially so for urea, two elements often demonstrated in the urine and kidneys of the fœtus by several distinguished authors (Denis, Wöhler, Prout, Virchow, Martin, Hoogeweg). Dr. Schwartz adds two more observations of his. The generation of an increased temperature in the living organism is due to the oxydation of matters, and it seems an established fact, that the fœtus for himself, is apt to produce warmth, independently of that which is conveyed to it with the blood of the mother. Another proof for the presence of oxygen in the fœtal blood is the excitability of the fœtal nerves and muscles, which function is inconsistent with the absence of free oxygen. In the chapter on the immediate consequences of interrupted placental circulation, the author describes a number of experimental vivisections, by which it was demonstrated, that the beginning of inspiratory efforts was a constant, next, and immediate result of an injured circulation of the blood in the placenta. But, if this is really the case, the question arises, why the fœtus does not make respiratory movements during every labor, in consequence of the disturbed fœto-placental circulation, as connected with every strong labor pain. In order to dissolve this problem the following points are ventilated : 1. From what depends the first inspiration of the fœtus ? Is the inspiration observed, really the first one ? and if this be the case, how can it be explained ? 2. Under which circumstances does the act of parturition effect a deficiency of oxygen, and an increased amount of carbonic acid in the fœtal blood, and in consequence, the beginning of respiratory movements and symptoms of suffocation, or rather intoxication ? How can this be recognized ? What are their evil influences upon the fœtal and extra-uterine life ? 3. To what degree does the act of parturition produce anomalies in the distribution of the blood in the fœtus ? What influence do they exert upon the condition of the fœtus or the new-born child ?



The answer upon these questions was derived from a number of 1,300 deliveries. Out of the children born 14 died before beginning labor ; 78 died during and in consequence of labor ; 172 were born still and resuscitated ; 60 were taken sick and died during the first fortnight after delivery. By a very simple experiment (opening the vein of the cord) it can be demonstrated that the fœto-placental circulation is cut off, as soon as the child is born. The first inspiration is observed at the moment, when the body of the child begins to pass through the os exterum, or earlier (before the shoulders are born), when the intra-uterine circulation has been interrupted by a strong pressure from the expulsive pain, by a circumvolution of the cord, by an early detachment of the placenta, and so on. From this it appears, that the thirst for oxygen is the chief factor for the inspiratory activity of the new-born child, and the observations of Osiander, Martin, Hohl, and others, give sufficient evidence, that the access of air to the new-born child, is not necessary for the beginning of respiration. On the other hand, it happens very often, that respiratory movements of the fœtus in utero can be perceived by the hand, introduced for the purpose of turning, whenever the cord is temporarily compressed by the operating hand. Several observations are reported. The fact that the change produced in the utero-fœtal circulation, by every pain, does not excite respiratory movements in the child, may be explained in the following manner : During a pain the blood in the uterine sinuses is not only driven back into the maternal system, but part of it into the placenta, from which it is promoted with greater force into the umbilical vein, while this same compression of the placental vessels prevents the fœtal blood from escaping with the same force, as it did before the pain, through the umbilical arteries ; thus, during a pain, a comparatively larger quantity of oxygenated blood is conveyed to the fœtal heart, and allowed to stay there for a greater length of time. This circumstance also accounts for the diminished frequency of fœtal pulsations, as long as the pain is lasting.

From a number of fifty-nine observations, reported minutely, it appears that the anatomical alterations of children, who died in consequence of the act of parturition, are twofold. One series comprises the consequences and symptoms of a disturbed exchange of gases in the fœtal blood, and may be called asphyxia, while the other shows the effects of a mechanical hindrance in the circulation. Although in most cases, both of them are combined, each of them has a distinct influence upon the fœtal life. Asphyxia of the fœtus is an intoxication of the fœtal blood, by a chemical alteration of its ingredients, and is caused by an insufficient receipt of oxygen through the maternal blood. Circumstances which are apt to interrupt the normal distribution of gases in the fœtal blood, are : death, or severe sickness of the mother, early detachment of the placenta, compression of the cord. But the most frequent and most insidious obstacle for the fœtal respiration, is a lasting and strong muscular action of the parturient uterus, inasmuch as it diminishes the amount of oxygenized blood in the placenta, by compression of the uterine vessels. That such is the case, is clearly proven, by several of the above-



named observations, and by the statistics of Dr. Veit, from which it appears, that the danger for the foetal life increases in proportion with the number of hours consumed for labor, and especially for the last stage of labor.

The symptoms of foetal asphyxia are an altered composition of the foetal blood, and the beginning of inspiratory movements. The alteration of the blood can be easily recognised in still-born children, the blood taken from both umbilical arteries and veins, is unusually dark and thin, while the extravasations of blood, deposited during intra-uterine life in still-born children, are void of fibrinous matter, which appearances are also found in adults, who died from asphyxia. The early respiratory movements of the foetus, in some rarer instances, could be perceived by some authors in the form of the so-called vagitus uterus, while in a considerably large number of cases, these movements could be felt by the hand introduced into the womb for the purpose of turning, or for reposition of a prolapsed funis (Observ. 3, 5, 15, 16, 19, 54, 57). A reliable symptom of respiration in utero is the rattling noise, always perceived with the first inspirations of resuscitated still-born children. The intensity of these gurgling sounds depends, from the quantity of liquor amnii aspirated in utero, and consequently from the frequency and energy of the early respirations. Accordingly, with these phenomena, the nose, choanes, pharynx, larynx, and even the trachea and smallest bronchia, are found replete with a viscid mucous from the cervix, with liquor amnii, blood, meconium, or vernix caseosa, in almost every child which died during labor. In very rare instances air is found in one or another portion of the foetal lung (Observ. 1, 11, 15, 33). Another constant result of asphyxia in children, is a more or less marked degree of plethora and peripheric ecchymosis of the respiratory organs, and, in many cases, a remarkable repletion of the superficial pulmonary capillary vessels. These appearances are sufficiently explained by the suction of the thorax, when enlarged by the action of the inspiratory muscles. These signs taken together, must be considered a very valuable addition to forensic examinations. Another influence of disturbed foeto-placental respiration, is a diminution of irritability by reflex-action; it seems that the altered condition of the blood tends to weaken the general irritability of the foetus. This want of sensibility is always in accordance with the existent degree of asphyxy in still-born children. The most important symptom of foetal asphyxia, is the diminished activity of the heart, perceptible before delivery is completed, it is equally valuable for diagnosis as for prognosis and treatment. With regard to the influence of labor upon the condition of the foetal pulse, Dr. Schwartz came to the following conclusions, based upon a large number of personal observations: In all cases of normal labor, the frequency of the foetal pulse remains unaltered from the first beginning, up to the termination of labor. In by far the greatest number of cases, the foetal heart offered 144 strokes in a minute; in one instance it was 180, in some few 120. Circumstances, which are apt to modify the pulse, are—movements of the foetus; pressure by uterine contractions, and paralysis of the heart from asphytic intoxication. A sufficiently

strong pain has generally a retarding influence upon the foetal heart, while in many cases, the foetal pulse is not at all altered in frequency during the pains. With the remission of the pain, the pulse acquires its former frequency, but if the pulse continues slow after the pain is over, this must be considered as a sign of existing danger for the foetal life. A lasting, gradual, or sudden decrease of the foetal pulse, is always the consequence of beginning asphyxia, and must be considered as the most reliable sign of approaching death. This sudden paralysis of the foetal heart, is always observed in those cases where the union between mother and child is entirely annihilated, as it happens in cases of early detachment of the placenta, or of a sudden and lasting compression of the cord. The results of Dr. Schwartz's researches on the signification of the early passage of urine and meconium, may be comprised in the following : 1. With children who die during or immediately after labor, or with those who are still-born and afterwards revived, the early passage of excrements is the rule, and is observed more frequently among the former class. 2. Both meconium and urine are altogether, under equal circumstances, more often early discharged in girls than in boys. Neither the state of development, nor the presentation of the foetus, nor the conditions of the soft parts, seem to have *ceteris paribus*, a decided influence upon the early passage of urine or meconium. From this it appears that the principal influence upon this discharge, must be sought in a modified vitality of the foetus, it is always an indication of approaching danger for the life of the child. All the different symptoms have to be taken into account, when we attempt to form a prognosis with regard to the ultimate safety of the child, and, above all, we have to watch the different changes occurring in the pulsations of the foetal heart ; we have to watch its strokes from the very first beginning of labor, because in this way alone we will be enabled to acquire a satisfactory judgment of the true condition of the activity of the heart. The indications to be fulfilled, whenever the life of the child seems to be in danger, are twofold ; first, to reëstablish the interrupted foeto-placental circulation ; secondly, if this be out of our reach, to repair it by atmospheric respiration. The first demand can only be complied with in cases of prolapsed funis, and a reposition must be attempted in all cases where the pulsations are not below 60 or 70 in a minute ; in the latter instance, the author's experience has convinced him, that the only safeguard for the foetal life, is a speedy delivery. Mechanical interference, moreover, is called for in all those cases where the paralysis of the foetal heart is going on *steadily* in consequence of all those other causes, which are apt to suppress a sufficient exchange of oxygenized blood. The treatment of children born in an asphyctic condition, consists in engaging and strengthening inspiratory movements, and in removing such obstructions, as might be apt to prevent them.

A very valuable addition to our knowledge of uterine and vaginal rupture, is Dr. LEHMANN's article on this subject. From an extensive private and hospital practice, the author was enabled to collect forty-one cases of rupture of the womb and the vagina. With regard to their cause, Dr. Lehmann divides the ruptures into three dif-

ferent classes, calling them spontaneous, accidental, and mechanical. In by far the greatest number, the predisposing cause of laceration is due to a morbid condition of the texture of uterus. From a comparison of eleven observations, reported in this article, with the opinions of other authors, Dr. Lehmann comes to the following conclusions. The location of the rupture is generally confined to the place, where the uterine walls are thinnest, viz., near its lower segment, and in some exceptional instances, near the fundus. According to the disposition of the muscular fibres, the lacerations run in a diagonal, or in a horizontal direction. In some cases the rupture is of a very small size, especially when it was caused by gangrena from pressure, be it against the promontory, or a sharp osseous edge, or a spina (pelvis spinosa Kilian). In incomplete, non-penetrating rupture, the uterine wall is only partially destroyed, while the uterine cavity remains closed. The remark, that uterine ruptures happen more often in deliveries of male, than in female children, is confirmed by Dr. Lehmann's observations. The first symptom of a rupture is generally a violent and sharp pain, experienced by the parturient woman; she cries out vehemently, expressing her sensation as if something had given away internally. Soon after this, labor comes suddenly to a stand still, and a more or less considerable quantity of blood issues from the vagina; the patient has fainting spells, the features have an expression of greatest anxiety, the pulse becomes rapid, very thin, extremities cold and dyspnoea, orthopnoea, vomiting of dark or bloody matters, seldom fail to make their appearance. Sometimes irregular pains return with short intermissions, while the presenting part of the fœtus is drawing back, instead of advancing. Drs. Kiwisch and M'Clintock have mentioned a rapidly developing emphysema among the prominent symptoms of rupture. In by far the greatest number of cases, death follows soon after the accident, and this same result often accompanies partial, non-penetrating ruptures, owing, as it seems, to the shock produced by the lesion of the organ on its height of physiological development and activity. Two cases are reported, where ruptures of a considerable extent, allowed the mothers to recover. With regard to treatment, Dr. Lehmann strongly advocates the operation of turning, in cases where the head is floating high above the brim of the pelvis, and gastrotomy in cases where a living child is deposited entirely in the peritoneal cavity. The placenta ought to be left in the womb, if it cannot be removed very easily. Against the hemorrhage and anæmia, cold fomentations of the abdomen, analeptica, mineral acids, etc., have to be administered.

Dr. M'CLINTOCK draws attention to a symptom observed in a case of ruptura uteri, which he thinks, might hereafter be found of value as a diagnostic of laceration of the uterus or vagina. This symptom was an emphysematous state of the integuments covering the hypogastrium. Its existence was detected by the stethoscope while searching for the fœtal heart. Examined for in this manner, the crepitation was loud and distinct, but to the touch it was not so obvious, except when firm pressure was made in the proper situation, then the crepitus was evident, and was recognized by Dr. Montgomery,

and by several pupils, who happened to be present. Upon post-mortem examination, the left broad ligament was found emphysematous, and a tear existed in the left side of the uterus, at the junction of the body and cervix. At some distance from this, the peritoneum was also lacerated, and a considerable quantity of blood had been effused into the abdominal cavity.

Dr. DILLON describes a case of uterine rupture, in which the rent was so large, that the margin of the liver and a mass of small intestines found entrance through it into the cavity of the uterus.

Dr. MORDRET, in his general remarks on the causes of death, assigns to them a triple seat, viz., the brain, the heart, or the lungs, the former organ always being primarily or secondarily affected when death occurs, as it is the seat of the vital principle. Death may be brought on by a material and traceable, or by a dynamic lesion of one or more of these central organs. The shock received may be so severe as to prove fatal, or a comparatively slight injury may combine with a preëxisting cause, to produce the fatal result. First of all, the digestive organs, at the very beginning of pregnancy, are at times the seat of considerable morbid affections, and some cases of sudden death came to Dr. Mordret's notice, which seemed to be owing to undue irritation of the alimentary canal; in one instance by a strong cathartic, in the other instance by the reception of an unusually large quantity of food. The chemical composition of the blood during pregnancy being characterized, by the diminution of red globules and of albumen, by the increased quantity of fibrin, phosphates, fat, and water, is one great source of pathological phenomena. The author thinks, that the physiological condition of the fœtus during the first months of gestation, demands an impoverished blood for its maintenance, and that the troubles from the digestive organs, such as vomiting, dislike of certain eatables, very properly tend to the formation of a blood thus qualified. The increase of fibrin in the blood of pregnant women is explained by the enormous growth of the uterus, which demands this constituent for its development, and nature endeavors to supply it. The diminution of the albumen may possibly be explained by the fact that part of it is changed into fibrin, with which it is isomeric, but it is more natural to attribute it to the constant drain to satisfy the demand of the fœtus.—The author's logic is not clear, nor are his deductions correct in such statements as these. The increasing uterus demands fibrin, and, therefore, the blood contains *more* fibrin; and the fœtus demands albumen, hence the blood contains *less* albumen, than under ordinary circumstances.—E. N. The increase of water is explained by the great want of water for the annexes of the fœtus. The bearing of this abnormal state of the blood upon the chances of sudden death, consists in the general debilitated condition of system arising from this source, while the increase of fibrin tends to favor inflammations and coagulations of blood in the heart or the vessels. The increase of albumen and water explains the frequency of hemorrhages and serous effusions. The disturbances in the circulation, which may lead to sudden death after and before delivery, take their rise from irregular

distribution of the quantity of blood present at certain moments, or from compression of the large abdominal veins. Among the preternatural secretions the author mentions, ptyalism, night sweats, and albuminuria. The latter condition (albuminuria), is treated in a few lines, and Dr. Mordret thinks that the presence of albumen in the urine, is of no etiological importance in regard to sudden death—we feel obliged to be of the opposite opinion, considering Bright's disease and its consequences, as the most frequent cause of sudden death in child-bed, except that coming from hemorrhage.—E. N. The innervation during pregnancy is often weakened, be it by the anæmic condition of the blood, or by the different sufferings, to which women are subject during labor.

An affection of the respiratory organs is one of the most frequent causes of sudden death. The lungs are predisposed to morbid attacks, by the pressure they have to suffer from the growing uterus, and by the compression of the large abdominal veins; while on the other hand an impoverished blood circulates through them, by the presence of which, their contractility is diminished. This is exemplified in a case by Devilliers, published in the *Revue Médicale*, where a woman died suddenly, during labor, after a severe syncope. The post-mortem examination showed a splenified condition of both lungs, the head was not opened. In another instance reported by Dr. Devilliers, the lesions found in the body, were cartilaginous induration of the mitral valve, œdema in the apex of the right lung, apoplexy in the inferior lobe of the same side, infiltration of the apex of the left lung and red hepatisation in the inferior lobus of the left lung, considerable quantities of serum in both pleural cavities. (This was, doubtless a case of embolia, E. N.). A similar observation, but without post-mortem examination, has been published by Dr. Aran, in the *Bulletin de Thérapeutique*. A case of sudden death in consequence of a double pleuro-pneumonia, is mentioned by Dr. d'Ollivier d'Angers. The following case, reported by the author as one of sudden death from pleuritis, is clearly one of Bright's diseases; the autopsy is minutely reported, with the exception of the condition of the kidneys. A case of sudden death after confinement, from asthma, is reported by Dr. Delamotte. Another cause of sudden death, is the rapid development of emphysema pulmonum during labor. According to Drs. Cazeaux, Leroy d'Etiolles, and Piedagnel, compression of the lungs from outside, or by the elevation of the diaphragm, (Dr. Lerrat) may lead to fatal asphyxis. Sudden death from an *affection of the heart*, arises mostly from a sudden bodily or mental shock, or a trouble in the circulation, when combined with a previous disease of this organ. Dr. Pelago gives a description of a case of sudden death from rupture of an aneurism in the last stage of labor (*Gaz. Méd.*, 1847). Similar cases are recorded by Drs. Cazeaux and McNicholl. Dr. Corvisart has observed a case of sudden death after delivery, from a sero-purulent pericarditis. The chief symptom of an affection from heart disease is the syncope, which, however, may seize a woman during confinement, while the heart is perfectly sound. In both instances the accoucheur has to shorten labor artificially, be it by instruments or by simply rupturing the membranes,

thus establishing a freer circulation. Under the head polypiform concretions of heart and the large vessels, three observations are recorded, one by Kieth, one by Havens, and that of the Duchess of Namour. Dr. Mordret considers the great quantity of fibrin in the blood of pregnant women, and accidental hemorrhage, as the principal causes in effecting these concretions.

Sudden death may be caused by the spontaneous production of gas in the blood-vessels, or by the artificial introduction of air into the system. The first cause is sufficiently demonstrated by the observations of Drs. Ollivier (d'Angers), Devergie, and Durand-Fardel. One of Ollivier's cases is communicated. A young woman, nearly nine months pregnant, died suddenly, with the signs of a violent dyspnoea. Post-mortem examination forty-eight hours after death. No alteration of importance to be found, but gas mixed in considerable quantity with the blood of the subcutaneous veins of the chest, which escaped with a whistling noise, upon incision; cavities of the right heart considerably enlarged, no clot inside. Lungs and brain healthy. An interesting observation of Dr. Durand-Fardel is added, where a non-pregnant woman died suddenly, while taking a bath, from spontaneous development of gas in the blood, as exhibited by the post-mortem, performed twelve hours after death. Two similar facts, one of which is recorded by Dr. Devergie, are mentioned by Dr. Mordret, who thinks that the predisposition for producing gas in the blood, during the pregnant state, is due to the anæmic condition of the blood. The entrance of air through the uterine veins has been demonstrated beyond doubt. Dr. Legallois has described this accident in animals, one of which was starved for the sake of an experiment, while two others were profusely bled. Two observations are recorded by Baudelocque; in both a hemorrhage preceded death, and gas was found in the heart and the large veins, although the autopsy was performed only five or six hours after death. Dr. Nelaton, while making an injection into the uterus of a dead woman, saw the injected mass enter one of the veins of the ligamentum latum, pushing a quantity of air-bubbles before itself. Dr. Bessems communicated a similar fact to the *Société de Médecine d'Angers*. In the latter instance a woman died after an injection of aqua oxymuriatica into the womb, and afterwards air was found in the heart and in the vena cava. Drs. Wintrich and McClintok have published several observations, proving the entrance of air into the uterine veins. The air absorbed by the uterine veins may be atmospheric air entering the uterus while in a relaxed state, or putrid gases formed from decaying matters in the womb. The entrance of air into the system is the more dangerous, in proportion as the quantity of blood is diminished by previous losses, a fact sufficiently proven by experiments upon animals, and thus, sudden death, after a comparatively small hemorrhage, may be caused, in some instances, by the entrance of air into the uterine system. The symptoms of entrance of air into the system, are a characteristic noise, a deep syncope, extreme paleness, pulse and respiration imperceptible, and death soon afterwards. In these cases treatment of course is out of the question. We are sorry to find the author perfectly ignorant,

as it seems, of the important theory raised by Frerichs, regarding the connection of Bright's disease, with the presence of carbonate of ammonia in the blood of pregnant women. Among the lesions of the nervous centres, apoplexy is the most frequent affection causing sudden death. Dr. Mordret favors the opinion, that pregnancy and labor bear in themselves a predisposition to cerebral affections, a fact, denied by Dr. Negrier. This predisposition is attributed to the compression of large veins and arteries from the womb, as well as from the contraction of muscles during labor-pains. Sudden death from a latent puerperal fever has been frequently observed. Dr. Dubois describes a case of sudden death from a latent sero-purulent peritonitis and lymphangitis in the *Journal de Médecine pratique*, art. 2832. Drs. Sundelin and Delamotte have published similar observations. Death following upon these accidents is explained by the depression of the ganglionic system:

Sudden death without any pathological lesions may be caused by a nervous apoplexy, by a syncope, or by an idiopathical asphyxy. As a sample of nervous apoplexy, the author mentions a case of puerperal convulsions, followed by a delirious and comatous state, which is described by J. Frank; the woman was saved by the use of stimulants. Interesting cases of lethargy, from which the patients recovered accidentally, are those of Ph. Peu and Puigandean. In the *Abeille Médicale* Dr. Poëlmán has published an interesting observation of nervous apoplexy fourteen days after confinement; a perfect paralysis of the right side, and all the other symptoms disappeared in a few hours, while a trouble in the speech; and absence of the radial pulse in the right arm, continued for some time. Other cases of nervous apoplexy are recorded by Drs. Dax (*Abeille Médicale*, 1849) and Artaud (*Revue. Thér. du Midi.*, 1850). Sudden death in these instances, is very often prompted by a wrong medication, in consequence of a wrong diagnosis. The differential diagnosis is taken partly from the antecedents, partly from the actual condition of the patient. It generally occurs in lymphatic, delicate, nervous, and hysterical women; the face is pale, pulse feeble, paralysis and coma are generally of short duration, often alternating with convulsions. Idiopathic asphyxy and nervous syncope are accidents which kill rapidly without any appreciable cause. In the first instance death occurs by the sudden suspension of respiration, its first and chief symptom is asphyxy, while idiopathic syncope are called those cases where the action of the heart is primitively suspended. A common character with both these affections and nervous apoplexy is the want of anatomical lesions. The heart is generally found empty, and in two observations the vena cava was in a state of vacuity, while in many instances the heart was far advanced in fatty degeneration. Many cases of death from syncope are doubtless owing to the exhaustion of the system from exceedingly violent pain after protracted confinement. Three observations illustrating this explanation are offered by Dr. Delamotte (*obs.* 218 and 389), one by Dr. Moreau (*traité d'accouchements tom. ii.*), and one by Dr. Mordret himself. Besides pain, a violent mental emotion, may cause sudden death. Dr. Peu mentions several instances,



where anger had a disastrous effect upon women in confinement. More than anger, fear is to be dreaded in its influence upon the patient, and many fatal cases are owing to this latter circumstance, as Dr. Frank had ample occasion to witness. The author gives the history of a woman who died suddenly, after an easy confinement from the annoyance she experienced, when she learned that her offspring was a girl, instead of a boy, as she expected. Still this case is not so very striking, as, besides a considerable hemorrhage, the placenta was not removed for six hours after delivery. Several other lesions existed, an enormous tympanitis, distension of the heart, uterus, stomach and intestines by gas; bloody serum in the pelvic cavity, hypostasis in the lungs, and so on. The observation is taken from Morgagni. Dr. Travers has noticed a case of sudden death after an easy confinement, in a lady, who, during the whole of her pregnancy was impressed with the idea, that she was bound to die in child-bed. The post-mortem discovered no anatomical lesion whatever. The observations taken from Dr. Gartlan is all but conclusive—abdominal pains and tympanitis were present, no post-mortem had been performed, and still the case is considered among those of sudden death from fright. The observation of Delamotte (*observation 230*) is of no greater value, as no autopsy is mentioned. To the 106th observation of the same author, we must make the same objection. A woman was frightened by a disagreeable nightmare three days before delivery; when the child and afterbirth were extracted, they were found in the highest degree of putrifaction; no autopsy. The following observation communicated by a midwife, who at the time of the occurrence, ten years ago, had no knowledge whatever of midwifery, is of no value at all. As an instance of death from protracted chill, the 27th observation of Madame Lachapelle is mentioned, although it was proven by the post-mortem that “all the serous membranes, but more particular the peritoneum, were bathed in a sanguinary liquid, while the entire blood was exceedingly thin and watery.” Under the head of “*fatal chill*,” another observation of Madame Lachapelle is put down, which is clearly nothing but a rapid peritonitis.

Dr. MORDRET says that nervous syncope is often the result of a gastric irritation, similar to the syncope of old men, from the same cause, and he thinks that the immediate cause of death, in similar instances, comes from a paralysis of the ganglionic system of the abdomen. Cases of sudden death shortly after delivery, without any anatomical lesions, are reported by Drs. McClintok, Chevalier, Davis, Denman, Sandras, Chailly. In some of these observations, an insignificant hemorrhage preceded death, and Dr. Mordret very justly remarks, that a violent hemorrhage is at times well enough supported by otherwise strong women, while even a slight hemorrhage after a protracted and painful confinement, is sufficient to cause death. Most of the observations here reported are—as it appears to the writer—perfectly valueless, owing to the absence of post mortem examinations. Sudden death not only occurs immediately after or during labor, but in some cases, a great while afterwards. Dr. Robert has communicated to the *Société de Chirurgie* four cases of sudden death, of which one occurred nine days, two sixteen days, and one twenty



days after a normal confinement. Only in the last case the autopsy was performed, but nothing worth notice was found, besides slight vascularisation of the pericardium, in the cavity of which, a spoonful of serum was found, the heart was somewhat more fatty than usual. In treating of the condition of women after delivery, Dr. Mordret very justly remarks, that the strict diet, as recommended by physicians in France, at this period, is, as a general rule, more injurious than beneficial, inasmuch as it tends to prolong the constitution of blood peculiar to pregnant women, viz., anæmia.

Dr. Villeneuve has published an observation in the *L'Union Médicale*, where a woman died suddenly on the twenty-sixth day after her delivery, after an access of tumultuous movements of the heart; no autopsy. Dr. McClintok records two cases of sudden death a few days after delivery; the post mortem examinations revealed nothing, but an anormal flaccidity of the heart, with complete absence of blood in its cavities, which condition Dr. Mordret attributes to an anæmic state of the blood.

In summing up, Dr. Mordret reviews the different causes of death before, during, and after confinement, and comes to the following conclusions:

1. If a woman dies suddenly during the puerperal period, it is very probable that her death was owing to this condition, an organic lesion producing death being present or not.

2. If a woman dies suddenly during confinement, a latent organic lesion may have existed before she became pregnant, or it may have been developed under the influence of pregnancy.

3. The introduction of air into the uterine veins is possible shortly after delivery. This introduction of air is a material cause of sudden death, which must have escaped recognition in many instances. The spontaneous development of gas in the blood seems to be favored by the puerperal state; but the facts known are not sufficiently conclusive.

4. It seems very likely, that the puerperal state predisposes to sanguinary concretions in the heart and the large vessels, a material cause of death very often not appreciated.

5. The chloro-anæmic condition, very frequent in pregnant women, seems to favor sudden death; it is at least a weakening influence, which is apt to diminish their vital resistance.

6. All weakening influences seem to predispose women in childbed to sudden death; it seems, at least, that this accident has been observed more frequently in multiparous women, than after the first confinement, and more often in lymphatic and nervous, than in robust persons.

7. Every instance of sudden death, which cannot be explained by an anatomical lesion, seems to be the result of a nervous affection, which may have its starting-point in the cerebro-spinal or in the ganglionic system.

8. The pernicious effects of pain, of mental emotions, of an unfit diet, etc., are incontestable in pregnant women. In every one of these circumstances, the nervous element is severely affected, and many cases of sudden death may be the result of one or more of these same circumstances combined.

DR. MARC D' ESPINE's treatise contains a statistical analysis of deaths occurring during, or shortly after delivery, from which he concludes, that the large lying-in hospitals were dangerous institutions for the safety of mothers, and he, therefore, recommends to have the women delivered in private dwellings.

In a case attended by DR. THORNTON, the mother died suddenly while in labor from some unascertained cause. Forty minutes elapsed after the patient's death, before Dr. Thornton arrived. On examination, he found that the membranes had been ruptured, that the head was in the cavity of the pelvis, the vertex presenting at the inferior strait. Dr. Thornton raised the foetal head, passed the hand into the flaccid womb, turned the child, and extracted it as far as the head without delay; at this point it momentarily hung until assisted by the fingers in its mouth. Thus forty-five minutes elapsed from the last expiration of the mother to the complete extraction of the child. The child did not breathe, and was of a blueish color; but a slight ticking could be heard on placing the ear over the heart. The fauces were cleared, Marshall Hall's ready method then diligently practiced for half an hour, when a convulsive inspiration took place. This method was persevered in, assisted by aspersions and frictions, and at length respiration was established. The child, a boy of the average size, sucked vigorously at the bottle, and lived for three weeks and two days; its death probably resulting from want of sufficient care.

Dr. RIGBY ventilates the question, what position a woman would assume, when left alone during labor? From the history of older times it appears, that women used to sit or kneel down. Dr. White, of Manchester, was the first who proposed to place parturient women on one side, as the most natural and most comfortable position for delivery. Dr. Naegele left a young primiparous woman entirely to herself in a room, which contained several chairs, one delivery-chair, one sofa, and one bed. During the first part of labor she adopted several attitudes, leaning against the wall, stooping over a chair, or on the sofa. Towards the end of labor she first lay down upon the sofa, then on the bed, where she remained. Here she threw herself around, now on her back, now on one or the other side; but when the head began to pass the external orifice, she took to lying on the left side, in which position she remained till all was over. This experiment induced Dr. Naegele to choose the left side as the most convenient position for women in labor.

Dr. KLORSCH analyzed a lithopædion, with a view to examine into the nature of a regressive metamorphosis, which presents the most physiological features of an entire organism undergoing retrograde changes, under the most perfect seclusion from the atmosphere. The specimen, taken from the womb of a cow, is rather a dermatopædion, than a lithopædion; a corrugated, indurated foetus, without calcareous deposits. The uterus from which it was taken exhibited not the slightest trace of cotyledones or placental formation. The inside of the uterus, as well as the foetus were covered with a thick, yellowish-brown substance, which, on chemical analysis, appeared to be a mixture of melanin, hæmatosin, fat-drops of a reddish color, and

crystals of hæmotoidin. This substance must be considered as the remnants of an hypertrophy of the entire mucous membrane, which condition is explained by the absence of cotyledones or placenta. The fleshy parts of the foetus were as hard as leather, containing a yellow, thick, fatty matter, to a great extent, but no earthy salts; all the intestines covered with fat; the greatest portion of the cranium filled with white or yellow fat; the brain, very much reduced in size, was a solid, dry, fatty mass; the organs contained in the thorax and abdomen very hard, dark, and covered with fat. A microscopical examination of the epidermis and chorion gave proof of their perfect integrity. The muscles had undergone fatty degeneration; the fat could be traced between the sarcolemma and the primitive bundles, while the proper contractile muscular substance remained intact. The tendons and fibrous membranes, dura mater, cartilages, and bones, were perfectly normal in structure—no fatty or calcareous metamorphosis. The heart was a solid, hard body; the vessels contracted and perfectly empty, with the exception of the larger venous sinuses of the head, which were filled entirely with a fatty substance, consisting of fat without fatty acids, and a very small quantity of earthy salts. The presence of this enormous quantity of fatty blood the author explains as well from the absence of the placenta, an organ intended for oxygenizing the foetal blood, as from the great amount of fatty matter from the blood of the mother. The microscopical elements of the brain and spine were unchanged, but both replete with fat and cholesterin.

Dr. HALL remarks that ulcerative inflammation of the mouth does not unfrequently appear in women during the closing months of utero-gestation. It is rarely met with in particular localities, while in others it seems to be endemic. The affection seems to be of an aphthous nature, and associated with a disordered system, as that of anæmia combined with a scrofulous diathesis, dyspepsia, etc. It attacks the mucous membrane indifferently, and is even migratory in its character. It sometimes becomes chronic. The treatment consisted of astringents, acids, and tonic medicines.

#### IV.—PATHOLOGY OF THE OVARIES.

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25. Driver, V. G., *Report of a Case of Ovarian Dropsy with Malignant Disease of the Uterus*.—Lancet II., 4, Oct.
26. Friedreich, N., *Compound Dermoid Ovarian Cyst with Vibratile Epithelium and Formation of Nervous Tissue ; Constitutional Syphilis, Extensive Amyloid Degeneration*.—Virchow's Archiv., XIII. 4, 5.

27. Reichel, H., *Dissertatio de ovarii carcinomate, subsequenti carcinomate secundario uteri, hepatis et omenti*.—Gryphiswaldæ 8, pp. 29.
- Reichel, *Thesis on Carcinoma of the Ovary with Secondary Carcinoma of the Uterus, Liver, etc.*
28. Guersant, *Double Hernia of the Ovary*.—Gaz. des Hôp., 74.
29. Faunet, *Ovaritis with Formation of Pus; Artificial Opening of the Abscess above the Arcus Pubis*.—Jour. de Toul., Jan.
30. *Differential Diagnosis of Hydrops Ovarii and Hydrops Ascites*.—Med. Tim. and Gaz., June 5.

The most important article, with regard to ovarian disease, is Dr. SIMON'S analysis of cases of ovariectomy performed in Germany, which reveals a frightful rate of mortality. In opposition to this we are happy to report a considerable number (14) of operations, performed exclusively in England and America, the favorable result of which is partly owing to a modification of the method, hitherto followed, with regard to the management of the peduncle. For this the profession is indebted to Drs. Atlee, Hutchinson, and Wells. The cases of ovariectomy are thus distributed: Hutchinson, 4; Wells, 4; Brown, 2; Peaslee, 2; Atlee, 1; Nelson, 1; Hewitt, 1; Humphrey, 1; Erichsen, 1; Childs, 1. Of the eighteen, fourteen recovered and four died. In two cases the tumor was ~~not~~ removed; both patients died. In eight cases the end of the peduncle was brought out externally; in one it was severed by the écraseur; of these seven recovered. Most of the cases were polycystic, and had firm adhesions. The account of operations published by Dr. PEASLEE is sufficiently interesting to justify a somewhat lengthy abstract.

I.—In the case of Miss Susan K. Russell, the operation of paracentesis was performed, preliminary to settling the question of the propriety of removing the mass of the tumor, which was evidently multilocular. After thirty-four pounds of fluid were removed from the two larger sacs, the mass could be moved somewhat in the cavity of the abdomen. The patient was in a very debilitated state (she had been tapped nine times previous to this), and so it was decided to give her the only remaining chance of living, viz., by the operation of ovariectomy.

Before commencing the operation the atmosphere of the room was rendered moist by the evaporation of water, and kept at a temperature of 80° F. The patient being under the influence of sulphuric ether, an incision was made through the abdominal walls, eight inches long. The tumor was found to be firmly *adherent everywhere anteriorly* above the level of the umbilicus, and by strong bands also to the stomach, the omentum and the right iliac fossa. Commencing, however, below the umbilicus, the hand, previously immersed in artificial serum at a blood heat (composed of water  $\frac{3}{4}$  iv.; white of eggs,  $\frac{3}{4}$  vi., and common salt  $\frac{3}{4}$  iv.), was introduced and forced up between the tumor and the parietal peritoneum, thus *tearing* away the adhesions. This was effected slowly, since, in most of their extent, the operator's whole strength was repeatedly applied before accomplishing the object. Prof. Peaslee attempted to separate the

adhesions at their inner extremity (that in contact with the tumor), in every part, so that if any hemorrhage ensued, the bleeding vessels could be easily ligated. No ligature was however required, though, for a few minutes, there was a general oozing of blood over the whole surface. Next, the tumor was lifted out of the abdomen, and a double ligature of four threads of saddler's silk, waxed, but not twisted, was passed through the middle of the pedicle; each portion was tightly tied round its respective half of it, and the latter was then divided. The pedicle (7" wide) was so short, that the ligature, when tied, came in contact with the tumor. The operator, therefore, cut it through to the substance of the tumor on both sides of the latter, at the distance of one-third of an inch from the ligatures, and dissected out the lower portion of the tumor from between the two layers of the pedicle. The tumor was a mass of sacs, containing fluids of different shades. The clots of blood and the remaining fluid were carefully removed with a fine sponge from the pelvis.

The incision was now closed by nine needles and six sutures; the two ligatures were brought out below the lowest needle at the end of the incision; a compress, wrung in blood-warm water, was applied and covered with oiled silk. The temperature of the room is to be kept at 70° or 75° Fah.; none but the water-dressing is to be applied, this being changed once in six hours; panada, milk-porridge, or broth, for nourishment; and stimulants and opiates to be given as may be required; the catheter to be used once in six hours.

At the third day after the operation, the whole incision was united by first intention. The ligatures came away one three months, the other four months after the operation. The patient recovered perfectly. In the course of recovery several abscesses formed in the subcutaneous areolar tissue, around and to the left of the ligatures.

II.—In the case of Mrs. Hannah Holt, a large tumor could be felt in the abdomen, apparently surrounded by fluid in the cavity of the peritoneum. After tapping the patient, thirty-four pounds of gelatinous fluid were obtained, when it was decided that the remaining unusually solid mass was a diseased left ovary, quite firmly attached at several points by adhesions. On the 28th of October, 1856, the tumor was removed by the large abdominal section. All the preparations of the apartment were made as in the preceding case. After the patient was brought fully under the influence of ether, an incision, eight inches long, was made through the parietes of the abdomen, whereupon several pounds of fluid escaped from the peritoneal cavity. The tumor consisted of a number of small sacs, and it was firmly adherent above on the right side, and these adhesions were torn away. But, at the lower part of the tumor, were two adhesions on the left side and one on the right, so strong as to resist the operator's whole strength in the attempt to tear them; and as they were in the form of tendinous bands, three-quarters of an inch in diameter, a strong double ligature was passed through the centre of each, and tying each of its two portions round one-half of the band, the latter was divided. Thus, six ligatures had already been applied. To the pedicle, being but five inches wide, and nowhere more than one-

quarter of an inch thick, a double ligature of three threads of saddler's silk was applied, and the tumor removed.

While attempting to tear the adhesions, the substance of the mass itself gave way at one part, and so much blood escaped among the convolutions of the alimentary canal, that at least three-quarters of an hour were spent in making sure of its entire removal, the exposed surface being all the while kept moist by the free application of the artificial serum. All the ligatures (two for the pedicle and six for bands divided) were brought out at the lower end of the incision.

The tumor removed weighed nine pounds ; it being of the areolar variety, or a congeries of small sacs, connected together by a large amount of areolar tissue. Eleven pounds of fluid also were removed from the cavity of the peritoneum at this operation. With the exception of a cough and excessive flatulence, no unpleasant symptoms occurred. The former one was relieved by opium, the latter by the application of the rectal tube.

Dr. Peaslee insists upon the importance of the artificial serum in aid of this operation, and says he would not hesitate to keep the cavity of the peritoneum exposed to view for any required length of time.

Dr. ATLEE removed a multilocular cyst in the usual way, through a cut in the mesian line, and the pedicle was severed from the tumor by the ecraseur in six and a-half minutes, and the external wound closed up by silver sutures. On the seventh day the sutures were removed, the wound being united throughout the whole extent. From this day the patient sat up daily, and recovered perfect health. Dr. Atlee has performed ovariectomy seven times, but in none of his cases was recovery so rapid, and constitutional disturbance so slight, as in this last one, treated by the ecraseur and silver sutures, which were applied in such a way that the peritoneum was not touched.

In the operations performed by Dr. SPENCER WELLS, he used a trocar, contrived by Mr. Thompson, in the midst of the canula of which an elastic tube can be attached, so that the fluid is conveyed away quietly and neatly, without unnerving the patient. The pedicle was secured between the blades of a metal clamp (Dr. Hutchinson's suggestion), very much like Ricord's penetrated forceps for circumcision.

In the third of Dr. HUTCHINSON'S cases the free edge of the liver seemed to be depending into the upper part of the cyst, and, therefore, any further attempt at removal was abandoned.

At the annual meeting of the Western Medical and Surgical Society of London, Dr. BARNES made some remarks with regard to the statistics of ovariectomy. He had been led to this subject by a case of unilocular cyst, in which he had lately successfully operated. Having given the details of this case, he adverted to his individual experience of operative proceedings for the radical cure of ovarian dropsy, which extended over 13 cases. In 8 of these the cyst was removed from the abdominal cavity ; in the remaining 5, the tumor, on account of adhesions could not be removed. Of the 8 removed, 2 of the patients died from the immediate effects of the operation, and 6 recovered, showing a mortality of 1 in 4, or of 25 per cent.

Of the 5 cases in which the tumor could not be removed, all recovered from the operation, thus in the 13 cases the mortality was only 2, or 1 in  $6\frac{1}{2}$ . Dr. R. Lee's cases of ovariectomy were the most unfavorable; but of 162 cases, 60 could not be removed; in 5 of these no tumor was present; of the 60 cases, 19 proved fatal, or rather less than 1 in 3. In the remaining 102, the disease was removed; in 1 of these cases both ovaries and the uterus were excised, and in another the ovary, with part of the uterus, and in 2 cases both ovaries; of these 102 cases, 42 proved fatal, or about 1 in  $2\frac{1}{2}$ . Dr. Clay, of Manchester, had had more experience. He had operated in 79 cases, and 55 proved successful, the mortality being about 30 per cent., or less than 1 in 3; so far as his experience went, the existence of adhesions did not interfere with the successful result. Dr. Atlee, of Philadelphia, had operated on 36 cases, 12 of which were fatal, or 1 in 3. In 13 cases, where the cyst was removed, occurring in the practice of Dr. F. Bird, 4 were fatal, or rather less than 1 in 3. In 21 cases recorded in Ranking's Abstract, and Braithwaite's Retrospect, since the date of Dr. Lee's paper, 7 proved fatal, or 1 in 3. Hence, Dr. Barnes believed, that we were not only warranted in performing the operation in properly selected cases, but that it was our bounden duty to recommend it.

Dr. SIMON's review of operations performed by German surgeons has been prepared with a great deal of care and judgment, in order to establish the true value of the operation. It contains not only those cases which have been published previously, but besides, 23 cases are added which were communicated to the author by private letters, mostly from the operators themselves. In reporting each case, he does not confine himself to short notices, but gives a history of every one of them. The results of the operations are divided under three heads, viz.: 1. Operations followed by a radical cure. 2. Operations resulting in death. 3. Operations from which the patients recovered at first, the ultimate good result of which was only temporary, dubious, or of no consequence at all. In the latter division are counted those cases where the operation had to be given up in consequence of too strong adhesions or a wrong diagnosis, or where the patients died at a later period from the operation, or from the original disease.

In all the former statistics (American, French, English) the cases coming under No. 3 are reported among the successful operations. Dr. Simon's analysis should therefore claim the undivided attention of the profession. Moreover, as most of the operations were performed at a recent date and by eminent surgeons, good diagnosis, scientific performance of the operation, and skillful after-treatment, were commonly secured.

Results: Of 61 patients operated upon, 44 died immediately after the operation, or  $72\frac{8}{11}$  per cent. In 5 patients the operation was of transient or no benefit at all, and only 12 were radically cured, or  $19\frac{4}{11}$  per cent. These results are by far less favorable than those of former statistics, and, from a comparison, ovariectomy is more dangerous than the Cæsarian section, because only 63 per cent. died in consequence of the latter, according to Dr. Kaiser's statistics, or



about  $\frac{2}{3}$  per cent., according to some other authors. (See Naegele's *Geburtsh. B. 2.*)

Dr. LACROIX reports the case of a woman who was affected with an ovarian cyst of the left side for two years, and the tumor had remained stationary during this time, being of the size of a child's head. When this woman became pregnant, the cyst began to develop considerably. At the full term regular pains set in, but labor did not advance. Therefore, the attending physician punctured the enormously distended abdomen, and drew  $16\frac{1}{2}$  litres of an albuminous fluid, and ten hours afterwards the woman was delivered in the natural way. Two months after this, Boinet's iodine solution (Tinct. jardi 150 grm. kal. hydrojod. 4 grm. aqu. destill. 150 grm.), was injected. After the injection was made, the orifice of the canula was closed for ten minutes. But when the opening of the canula was uncorked, in order to let the iodine escape, not one drop of the solution came away, though every effort was made for this purpose. Notwithstanding the inflammation following was very trifling, and disappeared after the sixth day. Three months after the injection, the patient was discharged perfectly cured.

In a case of ovarian dropsy, treated by Dr. HUTCHINSON, in the Metropolitan Free Hospital, a concentrated solution of iodine was employed, and allowed to remain in. The injection was practiced twice, with an interval of about a month, and on each occasion after the cyst had been as completely drained as possible, a scruple of iodine, and half a drachm of iodide of potassium, dissolved in an ounce of water, constituted the injection, and was wholly retained. The reasons which induced Mr. Hutchinson to employ so concentrated a solution, were, first, the belief, that, what was wanted to prevent re-secretion, was destruction of the epithelial lining membrane of the cyst by iodic cauterization, and that the stronger the fluid, the more certainly would this be effected. Secondly, the hope that so concentrated a solution would be less likely to be absorbed quickly, and might therefore be left in, to produce its full effect with greater safety. Thirdly, the consideration that it is almost impossible to empty an ovarian cyst entirely by the trocar, and that, therefore, a dilute solution is yet further reduced by mixture with the remaining fluid. Fourthly, that it is not desirable to introduce so much alcohol into the system, as is contained in from half a pint to a pint of tincture. With regard to the results it may be stated that, although four months have elapsed since the last injection, the patient remains quite well, a tendency to refilling being manifested.

A case of ovarian dropsy is reported from the practice of Dr. BICKERMANN, where eight ounces of the tincture were injected and retained, but with no success.

Two cases are reported by Dr. BROWER, in which Dr. T. B. Brown's method of *compression* after tapping were resorted to. After the cyst has been emptied by a large trocar, compresses of lint are so arranged, as to present a convex surface, and adapted as nicely as possible, to the concavity of the pelvis; over these, straps of adhesive plaster should be applied, so as to embrace the spine, meeting and crossing in front, and be extended from the vertebral articulation of the eighth

rib to the sacrum. Over this strapping, a broad flannel roller, or a band with strings and loops, which tie or lace in front, may be applied.

The first case treated in this way by Dr. Brower, was that of a unilocular cyst, in which ten pints of clear fluid had been drawn off by the trocar. It resulted in a radical cure of the ovarian disease, and restoration of general health, six months having elapsed without any appearance of a return of the disease. In 1845, the same operation was practiced upon a similar case, in which two distinct cysts occupied the right hypochondriac region. In the course of the first forty-eight hours, severe peritonitis set in, which was promptly subdued, and the case progressed to a final and radical cure. [The writer is of opinion that the last mentioned case cannot be counted at all. We do not know whether it was the pressure or the peritonitis, that effected the cure.—E. N.]

Dr. McDaniel reports a case where a woman was tapped for ovarian dropsy, 219 times, from 1841 to 1858. In this space of time 495 gallons of water were evacuated.

A case of death after paracentesis of an ovarian cyst has lately occurred at *St. Thomas's Hospital*. The operation was performed by Mr. Woakes, and about a pailful of thick fluid removed. The tumor was reduced in size, but a considerable bulk still remained. The woman gradually sank afterwards, and died exhausted on the fifth day.

As it often happens that *hydrops ovarii* and *ascites* are mistaken one for another; it is of importance to have an unfailing diagnostic symptom. This is presented by the percussions of the lateral lumbar regions. If in a case of ascites, the patient is brought in a sitting posture, the percussion in the lumbar regions offers an equal (generally dull) sound on both sides. In case of ovarian dropsy one side is found dull, and the opposite resonant. This is explained by the fact that in *hydrops ovarii*, the intestines are driven towards the healthy side. In this way we are also able to decide, which of the two ovaries is diseased.

## V. PATHOLOGY AND THERAPEUTICS OF UTERINE DISEASE.

### I. GENERAL DIAGNOSIS AND PATHOLOGY.

1. *Beiträge zur Geburtskunde und Gynaekologie*. Von Dr. F. W. von Scanzoni. III. Band. (Mit 10 lithographirten Tafeln). Würzburg, 1858.
- *Contributions to Midwifery and Diseases of Women*. By F. W. von Scanzoni, M.D. 3d Vol. (With 10 lithographs). Würzburg, 1858. (The single articles contained in this volume have been distributed among the respective heads.)
2. *Histoire philosophique et médicale de la femme, considérée dans toutes les époques principales de la vie avec ses diverses fonctions, avec les change-*

- ment qui surviennent dans son physique et son moral, avec l'hygiène applicable à son sexe et toutes les maladies qui peuvent l'attendre aux différents âges. Par Dr. Menville de Panson. Tom. I—III. Paris, J. B. Baillière. 8vo. 1858.
- *A Philosophical and Medical History of Woman, etc.* By Menville de Panson, M.D. Paris J. B. Baillière. 3 Vols. 8vo.
3. Rosier, *Dissertation sur les principales affections de la matrice.* Paris, 1858. 8vo. pp. 47.
- Rosier, *Thesis on the Principal affection of the Womb.* Paris, 1858. 8vo. pp. 47.
4. Cartwright, Sam'l A., *Practical Remarks on Epigenesis and Sterility.*—New Orleans Jour. XV. 4.
5. *A Treatise on the Employment of the Speculum in the Diagnosis and Treatment of Uterine Disease, with three hundred Cases.* By Robert Lee, M.D. London, John Churchill. 8vo. pp. 132. 1858.
6. Burgess, *Vaginal Stethoscope.*—Jour. de Bord. April.
7. McRuer, D., of Bangor, Me., *an Inquiry into the Merits of Modern Doctrines, regarding the Frequency, Importance, Pathology, and Treatment of Abrasions, Excoriations, and Ulcerations, of the Os and Cervix Uteri.*—Maine Med. Report. I. 4 and 5.
8. Clos, J. A. *on the Influence of the Moon upon Menstruation.*—Jour. de Toul. May.
9. Marable, J. T., of Memphis, Tenn., *on Cases of Early Catamenia.*—Memphis Recorder. February.
10. Scarburgh, G. T., *on a peculiar Case of Retention of the Menstrua from Occlusion of the Os Uteri.*—Virginia Med. Jour. XI. 3. Sept.
11. Farre, *on a periodical Neuralgia of the Womb and its Appendages; Daily and Annual Periodicity.*—Gaz. de Lyon. June.
12. Becquerel, *on Neuralgia of the Uterus.*—Gaz. des Hôp. 47.
13. Banks, J. T., *on Partial Black or Blue Coloration of the Skin.*—Dubl. Quart. Jour., May.
14. Busquet and Gestin, *on Partial Coloration of the Skin (Chromhidrosis).*—Gaz. des Hôp. 109.
15. Coote, Ch., *on Infra-Mammary Pain.*—Med. Tim. and Gaz. 421. July 24.
16. Plaskitt, J., *Treatment of Infra-Mammary Pain, by Electricity.*—Med. Tim. and Gaz. 433. Oct. 13.
17. Schlager, *on the Influence of Menstruation and its Anomalies upon the Development and Progress of Mental Derangement.*—Allg. Zeitschrift für Psych., von Damerow. B. XV. 4 and 5.
18. *Traité de la Folie des Femmes enceintes, des nouvelles accouchées et des nourrices, et considerations medic-legales qui se rattachant à ce sujet.* Par Dr. L. V. Marcé. In 8vo. Paris, 1858.
- *A Treatise on Insanity of Pregnant Women, etc.* By L. V. Marcé, M.D., etc.
19. Brosius, *on Uterine Congestion and Mental Derangement.*—Central Zeitung, 27.

20. *Recueil des faits pour servir à l'histoire des ovaires et des affections hysteriques de la femme.* Par Dr. Négrier. Angers : Cosnier et Lachèze. In 8vo. pp. 176. 1858.
- *Analysis of Facts connected with the History of the Ovaries and Hysterical Affections.* By Négrier, M.D., etc.
21. Pidoux, *Bronchitis with Laryngospasmus and Aphonia, Several Paralyzes and Neuralgias in a Hysterical Woman; Disappearance of all these Symptoms during a Typhus Fever, and their Reëpppearance after Recovery from the Fever.*—*L'Union* 11, 14, 15.
22. Drewry, *on Pathology of Hysteria.*—*Atlanta Jour.*, Jan.
23. Briquet, *On Anesthesia in Hysterical Women.*—*L'Union* 87, etc.
24. Nonat, *a Case of Hysteria and Symptomatic Retention of Urine, in Consequence of Endometritis and Perimetritis.*—*Gaz. des Hôp.* 31.
25. Althaus, T., *On Hysterical Aphonia.*—*Med. Tim. and Gaz.* 433. Oct. B.
26. Aran, F. A., *General Remarks on the Treatment of Uterine Disease.*—*Bull. de Thé.* April 30.—*New York Jour.* VI. 1. January, 1859.
27. Storer, H. R., *Cupping the Interior of the Uterus.*—*The Amer. Jour.* Oct.
28. Trend, H. G., *Abortion produced by Arsenic.*—*Brit. Med. Jour.*
29. Broca, *Fatal Peritonitis after Application of the Actual Cautery to the Uterine Neck.*—*Monit. des Hôp.* VI. 129. Oct. 30.
30. Scanzoni, *on a Case of Death occurring after Injection of Carbonic Acid into the Cavity of the Womb.*—*Beitr. zur Geburtsh.* B. 3. p. 181.—*New York Jour.* V. 2. Septemb.
31. Mackenzie, F. W., *on the Action of Galvanism on the Contractile Tissue of the Gravid Uterus, and on its Employment in Obstetrical Practice.*—*Lancet.* March.
32. Warren, *Occlusion of the Uterus—Rupture of the Left Fallopian Tube.*—*Boston Jour.* July.
33. Blair, *on Vicarious Menstruation.*—*Oglethorpe Jour.* April.
34. Kirsten, T., *on the Education of Midwives in Saxony.*—*Monatsschrift f. Geburtsk.* XII. 3. Sept.
35. Churchill, F., *on Obstetric Morality.*—*Dublin Quart Jour.* L. 1. August.

DR. LEE is the representative of a certain clique in England, and his treatise on the employment of the speculum will meet with a favorable reception among his adherents. From this point the work must be considered, it having no other value. Far from proving the necessity of restraining the use of the speculum, it reveals a deplorable state of practical sense and medical education among English practitioners. Nothing could have done more harm to the reputation of our brethren abroad than this little book. Every reader, who shall take the trouble to peruse it, must come to the same conclusion; and even Dr. Lee's great example, as recorded in the preliminary remarks, where a woman died eight days after an examination

with a speculum, from meningitis spinalis, proves nothing but the gross ignorance and barbarism of the attending physician.

DR. BURGESS has modified the shape of the ordinary stethoscope, so as to make it somewhat larger, for the purpose of introducing it into the vagina. In this way he was enabled to judge of the foetal life in the third and even second months of pregnancy. In the cases examined, a sound was perceived similar to that called placental souffle.

After a very elaborate analysis of the points contested by our leading men in uterine pathology, and after fully exposing his views upon the subject. DR. McRUE sums up in the following way :

1. Ulceration is a lesion presenting an excavation or solution of continuity, produced by a molecular death, the lifeless elements being absorbed back into the circulation through the action of the absorbents, and it is generally the result of a constitutional cause ; while abrasions and excavations are produced either by mechanical or chemical agents, by the attrition of foreign bodies, or the escharotic effects of morbid secretions, usually the product of other parts, and coming in contact with the ulcerated surface.

2. While abrasions or excavations are of frequent occurrence on the cervix uteri, especially in the pregnant female, ulceration rarely exists on that appendage, excepting from *mechanical* or *specific* causes, and all of these lesions, when not of a special character, are of themselves of trivial importance, only demanding by their complication with other more important diseases, the serious attention of the medical practitioner.

3. The premonstrative use of the speculum, or the direct application of caustics, are seldom justifiable or required in the diagnosis or treatment of diseases of the cervix uteri, for tactile demonstration is more to be relied upon than specular examination, and the application of caustic agents for the cure of simple lesions, ought never to be made *destructive*, but only to produce a modification of the molecular action of the parts diseased.

4. As abrasions, excavations, and ulcerations are in a great majority of cases, the result of constitutional disease, or functional derangement, therefore the treatment of these lesions must be principally directed to the general vitiation, or the physiological disturbance ; and to pronounce the local affection a disease *per se*, is to encourage a practice, which, while it does not remove the organic evil, subjects the patients to a greater injury by doing violence to their moral sensibilities.

DR. MARABLE reports four cases of early catamenia in negro girls from seven to eleven years of age, and suggests the inquiry, whether they arise from a recurrence to the original constitutional type of the race, or whether these cases are idiosyncrasies.

DR. SCARBURGH's case reads as follows : Mrs. H. E., a negro woman, suffered from occlusion of the os since her last unusually painful labor. On examination, a large, pear-shaped tumor was found extending from the symphysis as far up as above the umbilicus. Through the speculum the os appeared to be entirely closed by a false membrane. With a straight bistoury an attempt was made to

cut through the occluding membrane, but so dense and fibrous was it, that the effort was abandoned. Recourse was next had to a sharp trocar. This, too, after many unsuccessful efforts, was also abandoned. From the external toughness of the membrane, it was deemed useless to attempt to cut through it, and no further effort was made. The patient died soon afterwards from exhaustion.

*Autopsy.*—The abdominal tumor was soft and fluctuating in its lower two-thirds. The abdominal walls were closely adherent to the tumor, requiring nice dissection to separate them; so were the intestines. The neck of the uterus was with great difficulty cut through, and on entering the cavity, about a quart of muco-purulent fluid escaped, and lying in it was an oblong ball of coarse, matted hair, about four inches long, and two and a half inches in diameter. Attached to the walls of the cavity were found several smaller pieces of hair. The whole fundus uteri seemed to have been converted into a large cyst, which, upon being opened, was found to contain steatomatous matter, with numerous bands and some few bloodvessels traversing it in several directions. Dr. S. is of opinion that the hair was used as a tampon to stop a post-partum hemorrhage.

In the case reported by Dr. FARRE, the attacks of neuralgia appeared at about the same time in three successive years, and were at last successfully treated by valerianate of quinine.

In opposition to many physicians, who consider uterine neuralgia rather as a symptom, connected with pathological conditions of this organ, Dr. BEQUEREL believes it to be an idiopathical disease, not unfrequently met with. Its manifestations are intense, violent, lancinating, and intermittent pains, the seat of which is in most cases the uterus itself, from whence they are spreading at times to the lumbar region, hypogastrium, perineum, and fundament. The pain is generally increased by the touch. Continued and quick walking, as well as cohabitation, are apt to increase the suffering. Very often the entire nervous system shows an increased sensibility, owing to the diseased state of the womb. The author distinguishes a symptomatic, a utero-lumbar neuralgia, and a neurosis of the uterus.

The course of the disease is always of a chronic character, and mostly intermittent; the duration of symptomatic neuralgia always depends upon the primitive affection. The diagnosis must be derived from digital and from specular examination; in this way material changes may be easily recognized; the neurosis must be diagnosed by way of exclusion, its presence may be stated from the absence of organic disease and painful irradiations, the presence of the latter indicating an utero-lumbar neurosis. In regard to prognosis, it may be said that the disease is very difficult to remove, in exhausted anæmic subjects.

The treatment of symptomatic neuralgia has to be directed against the primitive disease; besides this, the neuralgia itself must be treated with the different narcotics; of great value, are the use of full baths, and in cases with a manifest intermittent character, the sulphate of quinine can be recommended. The method of Cruveilhier, who applies a mixture of linseed meal to the cervix uteri, is not praised by the author. He tries to apply the remedies to the

cervical canal, or to the cavity of the womb itself, by introducing small conical rollers formed of castor oil, gum-arabic, and tannin, into the womb; after ten or twelve hours they are melted down, thus leaving the tannin to act upon the mucous membrane. This has to be repeated every third or fourth day. The author has applied in the same way opium, belladonna, etc., with great benefit, thus lulling in a short time the most violent pains. Other important remedies are cold water-cures, the baths of St. Sauver, Ems, and sea-bathing.

From DR. BANKS' article we give the following abstract: Dr. Leroy de Mericourt first of all, described a peculiar coloration of the skin, which he encountered in several women at Brest. A case belonging to this class of diseases, has been already published by Dr. JAMES YONGE in the "*Philosophical Transactions*" of 1709. A similar case is reported by Dr. Billard, in 1831, who called it "cyanopathie cutanée." In all these instances the abnormal color was observed in young women from sixteen to twenty-two years of age. Out of ten cases, where the condition of menstruation is recorded, dysmenorrhœa or amenorrhœa, had preceded the morbid condition of the skin. This coloration ranges between the black of chinese ink and a deep blue. In those cases observed by Banks, the place affected looked as if painted with Berlin-blue. It is rarely confined to the eyelids alone, but spreads over the cheeks, the lateral portions of the nose and forehead. In Billard's case the coloration extended over the neck, chest, and abdomen. It is very remarkable, that in most instances pieces of linen, which cover the affected portions, are dyed with the blue color. In almost every case known disturbances in the menstruation had existed. Mental emotions, over-exercise, increased temperature have a tendency to increase the intensity of the color. Marriage and pregnancy seemed to have no influence with some of the patients; in one case, nursing seemed to modify the affection favorably. The shortest duration of the disease was three months; in one of Leroy's cases the disease lasted for seven years. Some of the cases were connected with hematemesis, hemoptæ, and other distressing symptoms. Banks' patient had been insane already two years, before the blue coloration of the eye-lids made its appearance. The nature of the affection is unknown up to the present time. Billard considers a modification of the transpiration from the skin as the source of the disease, while Neligar believes that the coloring matter is formed in the sebaceous glands, and hence he called it steorrhœa nigricans. Law called it blepharomelæna and Leroy, blepharomelanosis.

DR. BOUSQUET's article contains a historical sketch of the disease called chromhidrosis, with an addition of some new observations. The cases known up to the present time, are to the number of twenty-two: viz., Dr. Younge, of Portsmouth, one; Dr. Billard, of Corzé, one; Dr. Teewan, of London, one; Dr. Bousquet, of Montoulier, one; Dr. Neligan, of Dublin, one; Dr. Law, of Dublin, one; Dr. Banks, of Dublin, one; Dr. Leroy de Mericourt, of Brest, thirteen.

DR. COATE read a paper before the Harveian Society of London, on infra-mammary pain. Having discussed in detail each of the

characters of the pain, he examined briefly the most popular hypotheses, which had been devised to account for it. A very plausible hypothesis connects this pain with uterine or ovarian disorder. The pain is certainly of rare occurrence in the male ; but the author thought he had noticed two unambiguous cases of it, within the last eighteen months. Assuming for argument's sake, that it was limited to females, he proceeded to inquire, whether in them it was dependent upon uterine disorder ; with respect to age, he found that the period of uterine activity was the favorite, but not the exclusive epoch of the pain. Overlactation and excessive child-bearing were recognized in a few instances only. Four women (out of fifty cases analyzed) were sterile ; seven had a liability to abortion. The menstrual function was physiologically absent in twenty of the remaining thirty ; it was perfectly normal in eleven ; regular but scanty in seven ; regular but profuse in four ; irregular or absent in eight. Leucorrhœa was acknowledged in ten cases only ; in six of which, uterine disease existed. These facts appeared conclusive against the hypothesis. That uterine disorder frequently accompanied mammary pain was certain ; that it should be the cause of it was impossible. The next hypothesis, that of spinal irritation, was wholly unproved. The next hypothesis, that of Ollivier, and of Brown, of Glasgow, was, that the pain was the result of pressure upon the roots of spinal nerves, from a congestion of the intra-vertebral plexus of veins, or from a transient curvature of the spine, occasioned by disproportionate fatigue of some one set of spinal muscles. Another explanation, also based upon the idea of pressure, had been propounded by Henle, which accounts in some measure for the localization of the pain. The anatomical character by which the left infra-mammary region was distinguished, was the peculiarity of its venous circulation ; the effect of which was, that if any obstruction existed to the return of the venous blood by the azygos vein, the brunt of the pressure would fall upon the intermediate intercostal spaces of the left side. Henle thought that such pressure, acting upon the peripheral extremities of the intercostal nerves, might occasion the pain, and he suggested that the first impulse to disturbance of the circulation might be given by uterine or ovarian congestion. Dr. Coates' own explanation of the phenomenon in question, was given as follows : The constitutional character of the patients was well marked ; being universally that of defective nutrition. Twenty-one were anæmic. The concurrent diseases were phthisis, secondary syphilis, and diabetes mellitus. The functional derangements accompanying infra-mammary pain, were disorders of the vasomotory system of nerves, and of other nervous departments. Paralysis of the motor nerves had, as its immediate physical result, exalted temperature and local congestions. Hence, he inferred, that infra-mammary pain was a symptom of a generally depressed state of nervous power, and a symptom of vasomotory derangement. The conclusions drawn, were as follows : supra-mammary pain was a peripheral neuralgia, having its probable origin in mal-nutrition of the nerves of the part. This again resulted from disordered circulation, affecting the left infra-mammary region especially, by reason of its peculiar anatomical



relations, as exposed by Henle. The immediate cause of this vascular derangement, consisted in disordered enervation of the smaller arteries of the whole body; a condition which, while in the infammammary region, it occasioned neuralgia, in other parts gave rise to chills and flushes, to palpitation, to disturbed secretion, hæmorrhages, and flushes. The female was far more liable to all these derangements than the male. Therefore, the indications for treatment, were to stimulate the vasomotory nerves into temporary activity, so as to relieve special symptoms; secondly, to give them permanent vigor, by improving the general nutrition, by electricity, counter-irritation, good food, air, rest, and tonic medicines. Topical applications to the uterus and vagina had produced no effect upon the pains.

DR. PLASKITT reports that two patients, suffering from inter-mammary pain, were partially and temporarily relieved by wearing Pulvermacher's chains, while one was relieved by electricity.

DR. SCHLAGER, in his treatise on the influence of menstruation upon mental derangement, comes to the following conclusions, drawn from a considerable number of observations. In a large number of cases, the commencement of normal menstruation, exercises no influence upon the existing disturbance of mind, especially so in cases of hyperphrenia and aphrenia. But whenever an influence was manifested, it was that of increased cerebral and sexual excitement, even in those cases where the latter was absent at any other time. Some irregularities in the monthly courses, occasioned the development of psychical derangements, or modified their course. The primitive menostasia effected congestions of the brain with consecutive mental affections, or convulsions, which ceased with the show. The consecutive menostasies take a considerable share in the development of mania pro graviditate. The cessation of menses from pregnancy, provoked in many instances a mental derangement, which disappeared after delivery and reëpparance of the flux. Of considerable importance is the sudden suppression, which is generally followed by acute mania, chorea, catalepsy, or a relapse of those who had recovered their senses. Epistaxis seemed to afford a great relief in cases of imminent menostasia. The so-called imperfect menstruation has been often observed in women stricken with alienation of mind, and mostly in melancholia. Painful congestive and nervous menstruation were often observed. Premature involution promoted rapidly the primary mental affection into the consecutive form, under the symptoms of vehement cerebral congestion. In cases of this kind, the prognosis is very unfavorable. Diseases of mind originating at the normal change of life, are generally characterized as melancholia. In some cases, the disease already existing, changed very rapidly to aphrenia. Profuse menstruation was found in patients suffering from hyperphrenia and aphrenia.

DR. ARAN, in his article on treatment of uterine disease, remarks that both local and general treatment for curing diseases of the womb are of equal importance, and every single case has to be treated individually. The different abnormal conditions of the womb, as detected by examination, do not always demand medical treatment, but only in those instances where they really disturb the

health and comfort of the patient they have to be removed as far as possible. In most cases we must be satisfied with a palliative treatment, because it is very rarely desirable, or within the limits of our art, to push treatment so far as to reduce the womb to its natural condition. All that is required for a perfect cure consists in a lasting and entire removal of the functional disturbances.

The principal therapeutical indications to be attended to, in the greatest number of uterine diseases, may be comprised as follows: congestion, pains, profuse secretions, hypertrophy, and alterations in the position of the womb.

As the *congestion* has its chief source in the monthly afflux of blood to the womb, we have first, to diminish the state of congestion during the catamenia, and second, to remove the state of congestion that remains after every period up to the next time. To diminish congestion during the menstrual term, Dr. Aran recommends the application of leeches, and cautions against the rule of hydrotherapists who use cold-water baths, because he has seen alarming symptoms following their application.

The state of congestion after menstruation may be active or passive. In the former instance local antiphlogistics are to be used, while revulsive remedies (cold, external irritantia) are to be applied in passive congestion, depending upon a general or local state of atony.

The *pain* often depends on congestion or other lesions, and disappears upon the removal of the causes. In other instances, we are unable to find out the causes of pain, or it is so predominant, that we have to direct our remedies against this symptom alone. If the pain is more of a spasmodic character (*coliques-utérines*), the castoreum, camphor, and the different preparations of ammonia are generally prescribed successfully. But more often we are called to combat hyperæsthesia and neuralgia, and Dr. Aran highly recommends the local application of opium to the neck of the womb. He believes that he has rendered a great service to the profession by this advice, because it is free from evil consequences, such as nausea, constipation, etc., circumstances always following its general administration. [The writer's experience is opposed to Dr. Aran's proposition. I have often applied opium to the neck and to the inner surface of the womb. If it was given in a sufficiently large dose to soothe uterine pain, its influence upon the system seldom failed to manifest itself. In the case of a lady to whom I applied it lately, it gave rise to alarming symptoms, as violent vomiting, and speaking as if in a trance, for many hours.—E. N.] Other remedies, but with a much more transient effect, are cold, chloroform, and carbonic acid gas.

*Profuse secretions* have to be attended to especially, because their presence alone is often sufficient to produce irritation and ulceration of the tissues with which they are in contact. Therefore, injections are of great value, be it of water alone or of medicated solutions. Besides injections, the application of revulsive remedies, such as vapor baths, and more especially strong purgative injections, are of the greatest value.

Against the *hypertrophy* a local and general resolute treatment

has to be resorted to. The latter comprises the cutaneous and intestinal revulsives, and the internal administration of alteratives, such as mercury, iodine, arsenic, etc. These remedies are not only to be applied till the uterus is reduced to its natural size, but till the functional disturbances arising from hypertrophy are removed.

The *displacements* of the womb ought to be attended to as soon as they begin to disturb the patient's health. For this purpose the womb has to be replaced and maintained in its right position. In very many cases it is sufficient to unload the intestinal tube in order to prevent its pressure upon the uterus. Besides attending to falling of the womb itself, we have to treat the *functional derangements of the neighboring organs*. Above all, constipation is a most common coincidence with uterine disease. The best way of regulating the activity of the alimentary canal, is by the use of plain or medicated injections once or twice a day.

*Dysuria*, in uterine affections, is very often owing to an abnormal state of the urine itself, being overloaded with urea, or uric acid. If this is the case, the alkaline mineral waters are of the greatest use. The best way to regulate the *disturbed functions of the stomach* is a proper diet. Dr. Aran recommends roast meat above all, hydrotherapy, mineral waters, and sea-bathing. While hydrotherapy may be used at every stage of the disease, the use of mineral waters, and sea-bathing must be dispensed with until the first and gravest local symptoms are removed. [Altogether, Dr. Aran's notions of the therapeutical value of mineral waters are unsettled. He thinks that there is no difference in recommending a sulphureted, or a merely alkaline water, provided one is recommended. The application of waters containing iron is proposed as something new, while Dr. Aran ought to know, that they were in use in Germany for the cure of uterine disease half a century ago.—E. N.]

It often happens, at the close of treatment, that while the local lesions seem to be removed, the patient is troubled with violent pains. These pains, after some time, disappear spontaneously, and it would be wrong to subdue them by another energetic medication. This is the time when the patients are sent to the country or seashore with the greatest benefit.

The treatment of uterine disease has to be continued for a great length of time before the physician can be satisfied that the good effects obtained will be lasting, and the disease, if not cured entirely, will not fail to return soon and severely.

Dr. STORER describes an instrument for cupping the interior of the uterus. It consists of an air-pump, with a perforated tube, which is introduced into the cavity of the womb. Two cases of amenorrhœa are reported, where the instrument was successfully applied.

The carbonic acid gas has been applied of late as a local means more frequently, and Dr. SCANZONI himself has proposed its use for inducing premature confinement. The following case, therefore, is of no little interest, and will caution practitioners in the use of a remedy which hitherto has been considered void of danger, when locally applied. Dr. S. was called in consultation to see a lady who suffered from an enormous hypertrophy, with prolapsus of the cervix

uteri. He therefore recommended the removal of the diseased portions by an operation. The attending physician fully agreed with this proposition, but thought it a good plan to apply a remedy which, in his opinion, had an influence upon the contraction of the vascular system, in order to lessen the chances of excessive hemorrhage, after the amputation of the cervix. He therefore proposed to introduce the carbonic gas into the cervix uteri for several days. Dr. Scanzoni, though not believing that this remedy would have any considerable influence upon the quantity of blood to be lost after the operation, consented to its application, more out of regard to the attending physician. A dried pig's bladder, to which a canula was attached, was filled with the gas, and the mouthpiece introduced into the gaping orifice, and the bladder gently pressed. But scarcely two or three cubic inches had entered the cervix when the patient screamed out, saying, "I feel air entering my stomach, head, throat." These, her last words, were followed immediately by a violent, general tetanus, respiration became very difficult and rattling, the pulse weak and frequent, and notwithstanding everything was done by several physicians present, to save her life, she died  $1\frac{1}{2}$  hours after the application of the gas.

The post-mortem, two days after death, revealed no pathological condition whatever, besides a far advanced œdema of the lungs. But a pregnancy of four months was discovered, which was not detected during life, on account of certain peculiarities of the uterus, for the walls of the uterus were not much thicker than a piece of card-paper, so that it looked at first like a large cyst, filled with water. The hypertrophy generally connected with pregnancy seemed to be restricted to the uterine neck in this instance, and the distance between the external and internal orifice of the womb measured  $3\frac{1}{2}$  inches. The ovum was found in a perfect condition. No traces of peritonitis were found, and Dr. Scanzoni is of opinion, that the gas must have entered one of the larger uterine vessels.

After a number of experiments and observations, Dr. MacKenzie comes to the following conclusions: 1. A sustained current of electricity, directed longitudinally through the uterus from the upper portion of the spinal cord, exercises a remarkable influence in increasing the tonicity and contractility of the uterine fibre. 2. In such increased tonicity or contractility of the uterine fibre, so excited and sustained, we have a powerful and reliable means of moderating and controlling uterine hemorrhage, and of simultaneously accelerating the dilatation of the os uteri, and the general progress of labor. 3. Such sustained current of electricity may be continued for a lengthened period, when the object to be attained requires it, without any appreciable pain or inconvenience to the mother, or danger to the child.

DR. WARREN'S patient had a very severe confinement about four years ago, and had never menstruated since. On examination, a large prominent tumor was found in the abdomen, and not the slightest trace of the os uteri in the vagina. Soon after the vaginal examination was over a bloody or tarry discharge commenced to flow from the genitals, being accompanied by forcing uterine pains, and

with a great diminution of the abdominal swelling, which, however, was confined only to the right lobe of the abdominal tumor, while the left portion of the swelling remained unchanged. The following day suddenly she was seized with a violent pain in the abdomen, and she died in about two days. The post-mortem examination showed that the right lobe of the tumor had been formed by the uterus, which had emptied itself through the vagina. The left lobe consisted of the left Fallopian tube enormously distended into a very delicate sac by the retained menstrual fluid. There was no communication between the Fallopian tube and the uterus, and the tube had ruptured and discharged its contents into the abdominal cavity, causing death.

The subject of Dr. BLAIR's observation was a young lady of fifteen years, who never menstruated, but at each period had all the evidences of approaching menstruation, which would suddenly disappear, and she would be attacked with acute inflammation in the right eye. By appropriate treatment the patient began to menstruate freely, and was entirely restored.

Dr. CHURCHILL's article is an able defense of the operation of craniotomy, if the child be alive, in those cases where it is physically impossible, that a living child can be delivered per vias naturales. We fully sustain Dr. Churchill in defending the practice of destroying a child, which by no means can be born alive. We always acted on the same principle, and shall continue to do so. The few opponents of this practice, hold that craniotomy is just as dangerous for the life of the mother as Cæsarian operation, basing their assertions on the statistics in their reach. In order to put the respective statistics on a fair footing, the circumstances under which the operations were executed, ought to be taken into consideration. Most of the number of Cæsarian operations recorded in our annals have been performed under comparatively favorable circumstances, *i. e.* when the patient's strength was not impaired by previous protracted labor. If an equal number of *early* craniotomies would be compared with Cæsarian operations performed under the same circumstances, the result would be quite different, *i. e.* the average of fatal cases would be hardly more than one per cent. for craniotomy. But all this is theoretical reasoning and has only indirect bearing upon every day practice. Let the sister or the wife of our opponents be placed in the dilemma of craniotomy or Cæsarian operation, and all their sophistical reasoning will melt away like snow, before the warming rays of a feeling heart.—E. N.

## 2. RETARDED DEVELOPMENT, MALFORMATIONS AND DISPLACEMENTS.

1. Krieger, on *Atresia Ani and Uterus Bicornis*.—Monatschr. f. Geb. XII. 3.
2. Picard, *Retention of Menses. Owing to Imperforated Os Uteri; Operation; Recovery*.—Gaz. des Hôp. 64.

3. Caillat, *Imperforated Hymen*.—Gaz. des Hôp. 17.
4. Tuppert, *Case of Atresia Uteri Congenita*. Scanzoni's Beitr. z. Geburtstk. B. 3.
5. Holst, *Pregnancy with Bilocular Uterus*. Scanzoni's Beitr. z. Geburtstk. B. 3.
6. Van Holsbeck, *Amenorrhœa, owing to Imperforated Hymen*.—Presse méd. 17.
7. Patin, G., *Atresia Vaginæ; Operation during Labor*.—Med. Ztg., Russl. 24.
8. Coates, Ch., *Total Absence of Vagina*.—Lancet, II. July.
9. Sorbets, L., *Anteversion of the Womb during Delivery and Early Rupture of the Membranes*.—Gaz. des Hôp. 71.
10. Betz, F., *Incarceration of an Anteverted Pregnant Uterus*.—Memor. a. d. Praxis. III. 2.
11. Bonnet, A., *Du soulèvement et de la cauterization profonde du cul-de-sac retro-uterin dans les retroversions de la matrice*. Lyon, Vingtrinier. 8vo. pp. 30.  
— Bonnet, *on Replacement and Deep Cauterization of the Retro-Uterine Cul-de-Sac in Cases of Retroverted Uterus, etc.*
12. Villeneuve, *on Constipation as a Cause of Retroversion of the Womb during Pregnancy*.—Journ. de Bord. April.
13. Chapplain, *on Retroversion of the Pregnant Uterus*.—Gaz. des Hôp. 57.
14. Sims, M., *a New Uterine Elevator*.—Americ. Jour. LXIX. January.
15. White, *on a Case of Obliquity of the Uterus during Labor*. (Read before the Buffalo Med. Assoc.)—Buffalo Jour. IV. Vol. XIV. Sept.
16. Holst, F., *on the Treatment of Flexions of the Uterus*.—Scanzoni's Beitr. z. Geburtstk. B. 3.—N. Y. Jour. of Med. V. 2. Sept.
17. Castex, *Complete Inversion of the Uterus, Replaced by the Arabian Method*.—Gaz. med. de l'Algerie.—L'Union XII. 103. Aug. 31.
18. Verity, F. S., *Inversion of the Uterus Successfully Reduced*.—Montreal Chronicle. Nov.—Americ. Jour. LXIX. January.
19. Tyler Smith, W., *on a Case of Complete Inversion of the Uterus of nearly Twelve Years' Duration, Successfully Treated*.—Lancet. June.—N. Y. Jour. of Med. V. 2. Sept.
20. White, J. P., of Buffalo, *Report of a Case of Inversion of the Uterus, Successfully Reduced after Six Months, with Remarks on Reduction in Chronic Inversion*.—Amer. Jour. July.
21. Westmoreland, *on Prolapsus of the Uterus*.—Atlanta Jour. February.
22. Jobert de Lamballe, *Lectures on the Falling of the Womb*.—L'Union XII. 95. Aug. 12.
23. Mayer, C., *Prolapsus of the Uterus Complicated with Hypertrophy of the Uterine Neck; Treatment*.—Monatschr. f. Geburtstk. March.—N. Y. Jour. of Med. V. 1. July.

24. Huguier, on *Hypertrophy of the Uterus and its Neck in Connection with Prolapsus Uteri; Amputation of the Collum Uteri*.—Gaz. hebdomadaire, May, 14.
25. Bonorden, on *Prolapsus Uteri and its Treatment by Internal Remedies*.—Pr. Ver.-Ztg. 2.
26. Kunkler, on *Treatment of Prolapsus Uteri*.—Gazette des Hôp. June, 15.
27. Steele, H., *the Pessary and other Mechanical means in Prolapsus Uteri*.—Oglethorpe Med. and Surg. Jour. June and Oct.
28. Olivier, Cl., *The Pessaries in the Actual State of Science*.—Gaz. des Hôp, 91. Aug. 5.
29. Noeggerath, E., *Remarks on the Employment of Pessaries with the Description of a New Instrument. (With Illustrations)*.—New York Jour. V. 2. Sept.
30. Mayer, A. Jr., on *Uterine and Vaginal Prolapsus, its Treatment by Dr. Zwank's Instrument, and the Conditions which prevent its Application*.—Monatschrift f. Geburtsh. July.—N. Y. Jour. of Med. VI. 2. March, 1859.
31. Savage, H., *Clinical Experience on the Nature and Treatment of Uterine Deviations, more especially of Prolapsus*.—Med. Tim. and Gaz. 398. Feb. 13.—Lancet. June.
32. Bendot, Ch. P., *Essai sur les moyens chir. employés pour la cure radicale du prolapsus de l'utérus et sur l'épisiorrhaphie en particulier*. Thèse de Strasbourg. Impr. Silbermann. 8vo. pp. 55.  
— Bendot, on the Means employed for the Radical Cure of Prolapsus Uteri, more especially on Episiorrhaphy. Thesis.
33. Toland, H. H., *Procidentia Uteri*.—Operation; Cure.—Pacific Med. and Surg. Journ. I. 9. Sept.
34. Vernon, H. H., *Remarks upon M. Baker Brown's Operation for the Cure of Prolapsus and Procidentia Uteri*.—Lancet. February.
35. Brachet, on the *Curative Effect of Pregnancy upon Retroversion and Prolapsus of the Uterus*.—Gaz. de Lyon. Aug.
36. Rigby, E., *the Squatting Uterus*.—Med. Tim. and Gaz. Jan. 30.
37. Hecker, *A Remarkable Case of Retroversion Uteri in the Sixth Month of Pregnancy*.—Mon.-Schr. f. Geburtsh. XII 4. Oct.
38. Crosse, W. T., *Pathological Appearances fourteen years after the Removal, by Ligature of an Inverted Uterus*.—Med. Tim. and Gaz. 413. May, 29.

With regard to treatment of uterine displacements, we have received very encouraging reports from Prof. White of Buffalo, and Dr. Tyler Smith of London. Both of them were fortunate in the reduction of an inverted uterus of long standing, and each by a somewhat different proceeding. Further, we must call the attention of our readers to Dr. Mayer's and Huguier's articles on operative treatment of prolapsus uteri. The most important contribution to the doctrine of retarded development we have received by Dr. Krieger, of Berlin.

Dr. KRIEGER, after a synopsis of the embryological development of the urogenital system, proceeds to explain the coincidence of atresia ani and uterus bicornis, by the non-disappearance of the canalis urogenitalis, and mentions the not yet decided question of superfœtation. A number of cases has been published, in which a second child was born a few weeks or months after the birth of a first child. These cases are very few in number, and in most of them no anatomical examination of the uterus was performed. Those in which the condition of the uterus had been satisfactorily explored, are the following: In a thesis written by Dr. Cassan (*Recherches anatomiques et physiologiques sur les cas d' uterus double et de superfœtation*, Paris, 1826), 41 cases of uterus duplex are mentioned. Among them, several instances of double fœtation are reported; and the post-mortem examination of a woman, 40 years of age, whose double uterus had the appearance of two inverted pears, which were united at their neck, with a common os uteri. This woman had given birth to 14 children, none of which had been born at the full term. After having been delivered of twins of  $4\frac{1}{2}$  months' gestation with one placenta, she had another 6 weeks' fœtus, one month after the first confinement. In an article by Dr. Fordyce Barker (*The American Medical Monthly*, November, 1855), a case is reported dating about the middle of the last century, which the author himself thinks to be rather apocryphal. Mary Anne Rigaud, of Strasburg, 37 years old, was delivered on April 13, 1748, of a living, full grown male child; lochial and milk secretion stopped soon afterwards. On September 16th, *i. e.*, 5 months afterwards, the lady gave birth to another full-grown, living, female child. The autopsy, which was performed publicly, gave evidence of one single unicornous uterus. Dr. Barker, in the *Brit. and Foreign Med.-Chir. Review*, V. III., mentions another case: Gattera Barätti, mother of 6 children, was delivered on February 15, 1817, of her seventh, and on March 14th, in the same year, of her eighth child. Shortly before confinement, it was observed that her abdomen presented two distinct swellings, separated from each other by a longitudinal depression in the mesianline. After the first delivery, only the right tumor remained. The woman died of apoplexy in the year 1847, when a normal os and cervix uteri was found, while the uterus had two cornua, each of which was in connection with a Fallopian tube. The specimen is deposited in the Museum of Modena. The following case was observed by Dr. Barker himself. Mrs. X., was born in New York, in May, 1827; her menstrual courses appeared first, when she was 14 years old, and returned at regular intervals at 18 days, lasting from 7 to 8 days. After being married in October, 1854, she had her courses only twice, when on July 10, 1855, she gave birth to a healthy, full-grown male child. The lochial discharge lasted for only one week, and she nursed her baby well. Still her abdomen continued unusually large, and she thought she felt quickening on the left side. On September 22d, 74 days after the birth of the first child, she was delivered of a female child. The lochial discharge lasted for three weeks, still the mother continued nursing both her children. Upon examination on Oct. 24th, vagina and uterine neck were found in normal condition. Simpson's probe



introduced into the womb, could be felt through the abdominal walls two inches above the symphysis pubis in the left fossa iliaca, the cavity of the womb measured  $4\frac{1}{2}$  inches. After the probe was withdrawn it could also be introduced into the other cavity, its point could be felt one half of an inch above the symphysis pubis, towards the right side of the abdomen, for a distance of about one inch from the mesian line; this second cavity measured  $3\frac{1}{2}$  inches. Dr. Kannon, (*New Orleans Medical and Surgical Journal*, May, 1855), was called to a woman in child-bed, who had been delivered on the morning of the same day. The womb was empty and well contracted, the afterbirth removed. Dr. K. in examining the patient, detected a second os uteri near the symphysis pubis and a head presenting. As no pains were present, the operation of turning was tried, but could not be executed, and as the child was dead, it was removed by the hook. Both uterine cavities were separated from each other by a horizontal septum, of which the posterior one had a normal position, while the anterior one was situated much higher. This case is interesting, because the womb was divided in one anterior and one posterior cavity, instead of two lateral compartments. After these observations, a superfetation in a uterus bipartitus seems to be possible. Dugniolle (*Jour. de Med. de Bruxelles*, March, 1843), remarked that a young woman with double vagina and double vaginal portion, had a bloody discharge from both sides during the menstrual period. Oldham (*Gays' Hosp. Reports*, October, 1849), has observed the same coincidence, and in the case alluded to, during pregnancy of the one womb, the other stopped menstruating.

From this it appears, that a decidua is formed in both sides of a uterus duplex, by which also the empty cavity is closed, thus preventing another conception; therefore, the chances for a superfetation in cases of this nature, exist only for a short time, *i. e.*, up to the formation of the membrane decidua.

Dr. Sims' uterine elevator is intended to be used for elevating a retroverted uterus. The instrument is about thirteen inches long, and consists of a handle, a shaft, and a uterine stem inserted into a ball, which revolves at the end of the shaft, its axis being at right angles with that of the instrument. The ball is of ivory, about five-eighths of an inch in diameter, and has a belt of perforation three-sixteenths of an inch apart, extending around in a line with the stem. The shaft is a hollow cylinder containing a rod which is retracted at will by the slide, or pushed forward by a spiral spring, so that its point may lodge in any one of the perforations in the ball, whereby the stem may be held firmly at any desirable angle with the shaft. In using the instrument, the stem is set at the required angle with the shaft, and thus passed into the retroverted uterus, with the ball close up to the os tincae. Then by pulling back the slide, the rod is drawn out of the perforation in the ball, when it is free to revolve in the direction opposite to that of the motor power, and thus the uterus is revolved directly upwards.

After a short analysis of the causes, symptoms, and pathology of uterine flexions (ante and retro-flexion), Dr. Holsr proceeds to explain his mode of treating these affections. The treatment must be a gen-

eral and a local one. In the first cases which came under Dr. Holst's observation, he applied the self-retaining instrument (*redresseur*) of *Kiwisch Mayer*.—The introduction of the instrument and the reposition of the womb was never connected with any difficulties. But most of the women under treatment could not endure the presence of the instrument for any length of time. Violent pains, and spasmodic and hysterical disorders followed every protracted application. He therefore diminished the size and elasticity of the two upper arms, by which plan he succeeded so well, that most women could bear it sufficiently in the uterus. But, although he applied it for three or four hours daily, during several months, he could not record one single case of recovery, notwithstanding the simultaneous application of proper internal remedies. He therefore entirely changed his former plan of treating these malpositions, and with far better results. Above all, a course of general treatment was ordered, with a view to strengthen the system and relaxed state of the womb. The remedies used were cold and sea bathing, iron, ergot, and injections of cold water, by means of a strong douche. By making use of these remedies for many months, and even years, the patients became strong and healthy, menstruation regular, without pains, and the fluor albus stopped entirely. Of fourteen patients who were treated in this manner, all derived great benefit, while in two of them, the local disease (one ante-flexion, one retro-flexion), was entirely cured.

In the case reported by Dr. CASTEX, the inversion took place immediately after confinement, and was reduced in the following way: Two strong men seized the patient, and kept her suspended by the legs, head downwards. In this position, the womb was brought to its proper place, after it had been well oiled, by a midwife.

Dr. VERITY's case is so interesting, and so graphically described, that we give its history in full. Mrs. R. was about forty years of age, and the mother of nine children; her figure was squat and round, showing a large roomy pelvis; the abdomen pendulous; her health strong and rugged. She was taken in labor with her tenth child, and, while walking up and down, a sudden pain expelled the child, which fell on the floor, and was not materially hurt. Not so, however, the mother: the same pain which forced the fœtus from the uterus, "brought down," to use the words of the messenger who came for me, "the whole of her inside." I arrived at the scene of the accident about an hour afterwards. I found the woman lying on her back, on a mattress placed on the floor, deluged in blood. She was moaning and sighing, tossing her arms wildly about, and gasping for cold air. Her pulse could scarcely be felt at the wrist, and her countenance was blanched and ghastly. When the nurse turned down the bed-clothes, I was stunned; I saw before me my first, and I devoutly hope my last case of "inversion of the uterus." Occupying the space between her thighs, and nearly reaching down to her knees, was a large red membraneous looking mass, from which blood was oozing, and at its lowest part (the fundus), almost disguised by clotted blood, was attached the placenta. I immediately administered a tumbler of spirit and water, with tr. opii in it; applied warmth and friction to the extremities, and, without waiting, forth-

with proceeded to reduce the uterine mass to its proper position. After cleansing it from the clotted blood, the question arose in my mind, shall I reduce without removing placenta or not? Fearful of increasing the hæmorrhage, I determined to reduce with the placenta attached. Recollecting the rules laid down in the books, I began the attempt, and an attempt it was only. As soon as I touched the uterus, it contracted and shrank, and gave me the feeling as if I was holding a live eel in my hand. I tried two or three times gently, but firmly, to reduce it according to the usual directions; but I made not the least impression on it. The weight of the placenta bothered me greatly; for, on attempting to return the part that had last protruded, it was constantly dragged out of my fingers by the weighty placenta. I now determined to remove the placenta, and reduce the uterus by pressure on the fundus. I quickly detached the placenta, and was most agreeably surprised to find there was very little hæmorrhage; in fact, after it was removed, the mass shrank in volume. I now placed my left hand and forearm under the organ, and supporting it in a line with the proper axis, with my right hand half shut, I pressed the tips of my rounded fingers firmly against the fundus, and pushed it upwards, while my fingers were arrested by the constricted os. I made firm, but cautious pressure against it, and in about half a minute I felt it yield. I then boldly carried my hand upward in the axis of the pelvis, and when my wrist was passing the constricted os, the fundus suddenly shot from my hand, and the organ resumed its usual position. Retaining my hand within the uterus for a short time, constriction took place, and the uterus returned to its proper state and condition. The woman did well at first, but died on the third day, suddenly, after sitting up in the bed, for changing her night-dress.

The subject of DR. SMITH's case was delivered, at the age of eighteen, of a first child, and inversion occurred at that time, but was not suspected by her attendant. All attempts at replacing the uterus failed. The patient was sent to the author of the paper, in September, 1856, and symptoms of anæmia existed in the most marked degree. She was subject to epileptiform convulsions and frequent faintings. On examination, the uterus was found to be completely inverted, the neck of the uterus and the os uteri being very small and rigid; the author determined to attempt its reduction by continuous pressure, with the intention of dilating or developing the os and cervix uteri. With this object, the right hand was passed into the vagina, night and morning, and the uterus squeezed and moulded for about ten minutes at a time. Chloroform, which had been found so useful in cases of inversion of shorter standing, was not used, because of the feeble state of the heart and circulation, and the comparative absence of pain. In the intervals between these manipulations, the vagina was distended, and firm pressure exerted upwards by a large air pessary. These means gradually dilated the os uteri to such an extent, as to allow of the partial return of the uterus, and on the eighth day from the commencement complete reinversion took place. The subsequent recovery of the patient was perfect. She has since menstruated regularly, and is in excellent health.

DR. WHITE's article opens with the history of a case where he reduced the inverted uterus of a woman who had been delivered eight days previously. The reduction was perfected at one trial by the method of dimpling the most prominent part of the fundus. The patient died three days afterwards. The post-mortem examination revealed no cause of death, unless the anæmic condition of the tissues may be considered as such. A second case under the author's care was reduced soon after the accident. A third case was not visited until the fifteenth day, no effort at reduction being attempted.

On the 12th of March, 1858, Dr. White was requested, and saw a case of inversion of more than five months' standing, in consultation with Drs. Robinson, Reynals, Batten, and Dimick. On examination, the fundus was found just within the os externum, the body and neck of the organ occupied the vagina; the inversion was recognized as complete, and the organ scarcely larger than when in its natural position six months after delivery. The patient being placed horizontally across the bed and chloroformed, Dr. White introduced his right hand into the vagina, and firmly grasped the entire body and neck of the uterus. At the same time a large rectum bougie was carried up and also received into its palm, and held firmly in contact with the fundus of the uterus. Continuous gentle pressure was now made upon the external extremity of the bougie with the left hand, whilst the right compressed the uterine tumor. In this way the force was directed in the axis of the pelvic cavity, putting the vagina completely upon the stretch. After persevering in this effort as long as the strength of the operator could afford it, the tumor at length began to shorten at its neck, and the mouth of the uterus to push upon the upper surface of the hand. No depression of the fundus was at any time perceptible. At last the fundus passed out of the hand, and was easily pushed by the bougie through the neck of the organ up to its proper position. The full reduction of the uterus was afterwards demonstrated by the uterine sound and the speculum. The bougie was retained in the uterus till the next day by the attending physicians, and ergot given to promote tonic contraction of the uterus. The patient afterwards recovered entirely.

In concluding this highly interesting paper, Dr. White remarks that the reduction by dimpling the fundus ought to be restricted to recent cases, as in those of old standing the uterine cavity left is too small, and the organ too firm, for any depression to be made upon the walls of the fundus.

Dr. JOBERT, in a lecture on prolapsus uteri, rejects the use of pessaries altogether. He does not seem to have given them a fair trial, nor does he seem to be sufficiently acquainted with the different forms of instruments in use for prolapsed uterus.

At a meeting of the Berlin Obstetrical Society, Dr. MAYER read a paper on the removal of the uterine neck for the cure of prolapsus. In those cases of falling of the womb which are accompanied by enlargement of the neck of the uterus, every sort of mechanical treatment is contra-indicated, partially because the pessary cannot be placed in a fit position, partially because in most cases it can be

endured only for a short time, owing to the great pain following its application. The best and safest remedy for this hypertrophy is amputation of the neck, which has been executed several times by Dr. Mayer. In performing it, the womb is drawn downwards as far as possible by strong hooks, and the diseased portion removed by the knife. This is generally followed by profuse hemorrhage, which is promptly arrested by the actual cautery. The after-treatment is that of a plain cut wound; pledgets of lint, well covered with oil, are applied to it; the vagina is to be cleansed frequently by injection; the wound to be brushed over with a solution of nitrate of silver, and the womb, which generally contracts after the operation, to be retained by a lint plug.

These views were illustrated by the report of a number of cases in which this operation was performed, and have proved successful. In a discussion which followed, it was suggested and accepted, that these operations might have been performed, just as safely, if not more so, by the *écraseur*.

[The use of the *écraseur* is now in the very height of fashion; but when the excitement has cooled down, its use will be restricted to the proper cases. The writer is of opinion that the amputation of the neck of the uterus for curing prolapsus, when executed by the knife and actual cautery, will be followed by better results than when performed by the *écraseur*. In the cases referred to, the entire womb participates more or less in the hypertrophy of the neck, and, therefore, a good depletion following the cut, and the application of so strong an agent as the hot iron, must be of good service to the remaining diseased portion, while the *écrasement* is followed by scarcely any reaction.—E. N.]

Dr. HUGUIER remarks that, in most cases where the womb appears outside the external orifice, this is not owing to a prolapsus, but generally to a partial or total hypertrophy of this organ, the fundus uteri remaining in its usual position, while its cavity is enlarged. The neck of the womb is lengthened only in its vaginal portion or in its full extent. To prove the correctness of his opinion the author reports a number of observations, and expresses his belief that, among thirty cases, scarcely a single true prolapsus may be found. The only remedy justifiable for this condition is the amputation of the neck of the womb, which he performed successfully in thirteen cases.

Dr. BONORDEN believes that the most common cause of prolapsus is hypertrophy of the womb, and relaxation of the round and lateral ligaments, and he tries to remove these morbid conditions by the following treatment: the patient begins to take every day the following powders: *R. secal. cornut. gr. iii., gummi galbani, gr. x.,* decreasing the quantity as the disease lessens; at the same time a *mistura oleoso-balsamica* is rubbed over the *mons veneris*, the thighs, and vulva several times a day. Two cases are reported in which the treatment proved successful.

Dr. KUNKLER reports three cases of prolapsus uteri, which were benefited by the local application of tannin. He recommends a strong solution of tannin in glycerine, to be applied with a cotton plug, and rest in a recumbent position till a cure is effected.

Dr. STEELE, in his able article on prolapsus uteri, strongly recommends the so-called radical plan for treatment, consisting chiefly of rest, local antiphlogistic, and adstringent remedies. If these means should fail to effect a cure, the use of a uterine supporter is recommended, similar to that proposed by Dr. C. Mayer, of Berlin.

From Dr. A. MAYER's article it appears, that Dr. Zwank's hystrophor was applied in two hundred and three cases. Fourteen of these women discontinued treatment, because the instruments did not agree with them, producing ulcerations and pain; two patients removed the instrument on their own account, and sent it back without giving it further trial; two preferred an abdominal supporter; and seven cases only offered invincible difficulties to the application of the instrument. One of these suffered from a far advanced hydrops ascites. The second patient was so deformed and stiff in her limbs, that it was impossible for her to remove and introduce the instrument; a third one could not have an instrument for the same reason, because her arms were paralyzed. With two patients the vagina was so irritable, that every instrument created violent pains, after it had been born for a short time. In two very old patients the vagina was so short and rigid, that even the smallest size could not be entirely shut when introduced.

Before an instrument was applied, those complications as could be healed (metritis, hyperæmia, hypersæsthesia, ulcerations), were first removed. The greatest difficulty was experienced in the treatment of those occasional ulcerations which are located in the walls of the vagina. The application of caustics, nitrate of silver, etc., was always followed by an aggravation of the symptoms, while repeated scarifications, and the use of acid. pyrolignos. succeeded better, though after a considerable length of time.

Simple hypertrophies of the womb, as a general rule, did not interfere with the successful application of Dr. Zwank's instrument, while in those cases, where hypertrophy and lesions of the womb were combined, the greatest difficulties presented themselves to the use of the hystrophor—such as violent back-ache, bearing down, increased painfulness of the womb, ulcerations of the labia and vagina. In these instances the womb has to be first replaced by the probe, and retained in its position for some time by a plug, introduced into the vagina, after which an instrument may be tried again.

The leading point in searching for the right size of the instrument is the space and direction of the arcus pubis, an average shape of which may be acquired by the introduction of the second and third fingers, thus establishing the distances of the two pubic bones. Very often a comparatively small instrument is required for retaining very extensive prolapsus. This remark applies also to cases of prolapsus combined with rupture of the perineum, which are very often benefited by a small instrument of Zwank, while all the other kinds failed to retain the womb in its position. Still the question, if the instrument is of a fitting size, will be lastly decided by the sensations of the patient when she has worn it for several days, after the very first disagreeable impression of a foreign body in the vagina, are overcome. If the instrument chosen is of the right size, the patient, after some days, will be scarcely aware of its presence.

Sometimes it happens that a portion of the vagina works itself beneath the anterior edge of the instrument and appears outside the vagina. To remedy this, an instrument must be chosen, the greatest breadth of which is situated in the centre, *i. e.* where the two lateral wings are joined. By the invention of Dr. Zwank, the bloody operation, episiorrhaphy, elytrorrhaphy, the pincement du vagin, etc., have been supplanted, because by Zwank's hysterophor *almost all* cases of prolapsus are retained, of whatever shape and size they may be, provided the right instrument has been chosen. The conditions which forbid the application of Dr. Zwank's hysterophor are: carcinoma uteri; hypertrophy of the neck of the womb; very narrow, rigid vaginal walls, as often met with in very old women; large pelvic tumors; far advanced hydrops; some very rare cases of distorted pelvis.

Dr. SAVAGE, in a clinical lecture on prolapsus uteri, mentions the following experiments on the dead body. The pelvis having been exposed to view, traction was made on the os uteri by means of a forceps, introduced by the vagina, so as to make the uterus take the ordinary course of prolapsus. A descent of an inch and a half rendered the cervical ligaments very tense, another half-inch and they began to yield. They were now cut through and the uterus descended at once another inch. The strain was now found to be sustained by the pelvic peritoneal lining, which yielded slowly onwards towards the broad ligaments, which lastly was only put on the stretch when the uterus was drawn well out of the vulva. From these, and several other experiments, it appears that the uterus under normal circumstances, is retained at a certain elevation in the pelvis by the cervical ligaments—these ligaments, and these only, tend to prevent prolapsus. The vagina does not in the least support the uterus. When not inverted, the direction of the superincumbent pressure tends to keep its sides together. In this sense only can it be said to prevent prolapsus; even so it can have no share in doing this, until the uterus has lost the support of its cervical ligaments; on the contrary, it is these ligaments that preserve the elongated position of the vagina, which would otherwise, as it does in fact in prolapsus, shorten into numerous transverse folds.

With regard to pessaries, Dr. Savage remarks: Simpson's compound pessary answers perfectly when the patient can bear it, which, alas, is very seldom, if ever. The ball pessary is the best of all, when the perineal end of the vaginal cone retains its elasticity. The best stem pessary, the only active support, is readily made by fastening firmly a piece of sponge to one end of a piece of gutta-percha tubing. The opposite end has attached to it four pieces of elastic vulcanized caoutchouc, which pass up, two before and two behind, to a band round the abdomen, or to the ordinary corsets.

This latter form is invaluable in some cases, particularly for temporary use. A small quantity of any injection can be thrown up through the tube. It can be introduced and removed by the patient herself. Dr. Zwank's pessary finds its way invariably where it is intended to go. The patient can manage it herself without difficulty. The screw was found an objection, and Mr. Russell, an instrument-



maker has made a substitute, which renders Zwank's pessary the most perfect yet devised.

In those cases where pessaries cannot retain the prolapsus, the episiorrhaphy, must be performed. After a short historical analysis of the various surgical plans for treating prolapsus uteri (*Marshall Hall, Dieffenbach, Ivory Kennedy, Phillips, Desgranges, Fricke, Geddings, Brown*), Dr. Savage proposes his own method, which is a slight but important modification of Geddings' operation and which was applied successfully in eleven cases. Having, by pinching up more or less of the flaccid vulva, carefully ascertained how much integument may be removed, a flap of suitable size is marked off by a sharp scalpel, and then dissected away, commencing with the skin, and ending with the vagina; the *entire thickness* of which, however, is taken away as far as the perineal fascia, after which the raw surfaces are united by quilled suture, and five or six points of interrupted suture, which are removed on the sixth day.

Dr. TOLAND reports a case of prolapsus uteri treated by excision of stripes from the vaginal walls. The patient is pronounced cured two weeks after the removal of the sutures. [We are of opinion that four weeks is a time too short to judge of the efficiency of an operation of this kind. If a patient with prolapsus uteri has been laid up for four weeks, this alone will bring on a considerable change in the condition of the parts, compared with their previous displacement. This remark not only applies to Dr. Toland's case, but to almost all the cases reported in periodicals, and we will never get at a fair estimate of what the surgical operation does for prolapsus uteri, unless the operators will give us accounts of their patients' conditions at least one or two years after the operations were performed.—E. N.].

Dr. VERNON's article is written with a good deal of feeling against Dr. Baker Brown, who seems to have touched our author's "corde sensible." Two cases are reported of relapsed falling of the womb after Baker Brown's operation.

Dr. RIGBY describes a peculiar condition of the womb, which he calls the "squatting uterus," where the body of the uterus is too weak to sustain the fundus and the pressure of the intestines upon the latter; it thenceforth must yield in every direction, so that the fundus approaches the orifice. The following symptoms are connected with the disease: pain behind the symphysis pubis, increased by the upright position, extending to the bladder or rectum; the menses are generally very copious. The uterus, upon examination, is found enlarged, of a spherical shape, very soft, while the cervix feels hard, and is short and painful. The probe passes the orifice easily, while its further advance is generally connected with pain; the cavity is found enlarged, and after the fundus has been elevated to its full extent, the probe measures generally 3" at the external orifice, even in women who have never been pregnant. The patient feels immediate relief as soon as the fundus has been brought to its right position by the sound. The treatment of this disease consists chiefly in the application of general and local tonics, and rest of the body.

Dr. CROSSE presented a specimen in the Norwich Pathological



Society, which was taken from a woman, whose uterus had been removed in 1843 by ligature, by the late Mr. Crosse, in consequence of its having become inverted after labor. In August, 1849, this patient suffered an attack of profuse hemorrhage, which was checked by the internal administration of ergot and plugging the vagina. In 1856 she became an inmate of the Norwich Bethel, having become despondent and melancholic and possessed of many delusions. From this place she was discharged cured at the expiration of six months, but she suffered a relapse the year following, and in October, 1857, destroyed herself by hanging. At the post-mortem the ovaries were found to be of natural size, occupying a central position, and lying almost side by side in the cavity of the pelvis. They had their usual relation to the fallopian tubes, which were similarly displaced and found to be pervious for several inches. The vagina was perfectly healthy and very capacious. The os uteri was normal in its situation; there were several abrasions of its surface; a probe could be passed in through it, to the extent of about one inch and a half. The remaining tissues did not appear to have undergone any other material alteration, either in position or structure.

Dr. HECKER was called to a woman in full labor pains, who was in her sixth month of pregnancy; the fundus uteri could be felt distinctly below the umbilicus; but, by examining internally, no os could be perceived, only a slight depression in the anterior laquear vaginae, just behind and above the symphysis, while a large, fluctuating tumor protruded in the midst of the pelvis, which hardened and enlarged considerably with every pain, thus giving apprehension of its liability to rupture. While the woman was under the influence of an anæsthetic, the doctor introduced his hand into the vagina, and at last succeeded, after repeated trials, in pushing the tumor in question up into the upper pelvis. As soon as the tumor began to move, another tumor came down from behind the os pubis, which was nothing but the presenting bladder. It burst immediately, and two feet came down into the vagina, when a living six months' child was extracted.

Dr. BRACHET reports the case of a woman who had been treated for retroversion of the womb, during thirteen years, without deriving any benefit. Being recently delivered of a child, she was ordered not to leave her bed for forty days, and to use at once adstringent injections, which treatment effected a permanent cure. Another woman, suffering from prolapsus uteri, underwent the same treatment with equal success.

### 3. UTERINE AND PERI-UTERINE HEMORRHAGES.

1. *De l'hématocèle peri-utérine et de ses sources.* Par Albert Puech, Doct. en méd., etc. Montpellier: Boehm, 1858. In 8vo. pp. 102.  
— *On Peri-Uterine Hematocèle, and its Sources.* By A. Puech, M.D., etc., etc.
2. Puech, A., *Hemorrhage of the Fallopian Tube.—Rupture of the Utero-Ovarian Plexus followed by Thrombus of the Pelvis.*—Gaz. Hebdomadaire. V. 22. 28.

3. Puech, A., on *Apoplexy of the Ovaries*.—Gaz. des Hôp. 88.
4. Oulmont, on *Hematocele Retro-Uterina*.—L'Union. June, 8.
5. Nonat, on *Peri-Uterine Hematocele*.—Gaz. Hebdomadaire. V. 23.
6. Trousseau, on *Catamenial Retro-Uterine Hematocele*.—Gaz. des Hôp. 72. June, 2.
7. Becquerel, on *Hematocele Peri-Uterina*.—Gaz. des Hôp. 41.
8. *De l'hématocèle retro-utérine*. Par Dr. Aug. Voisin. Paris, Ad. Delahaye. In 4. de 127 pp. et 4 tabl. 1858.
- *Retro-Uterine Hematocele*. By Aug. Voisin, M.D., etc.
9. *Du varicocèle ovarien et de son influence sur le développement de l'hématocèle retro-utérine*. Par le docteur Devalz. Paris, Delahaye. In 4. de 247 pages. 1858.
- *On Ovarian Hematocele and its Influence upon the Development of Retro-Uterine Hematocele*. By Devalz, M.D., etc.
10. L. Genouville, on *Peri-Uterine Hematocele*.—Arch. gén. Oct.
11. Bennet, H., *Hemorrhage during the first Months of Pregnancy*.—Lancet. January.
12. Routh, on *three Cases of Menorrhagia, two of them depending upon the Presence of Uterine Polypi, Successfully Treated*. (Samaritan Hospital).
13. *De la metrorrhagie symptomatique*. Thèse. Par Dr. Letellier, Paris, 1858.
- *On Symptomatic Hemorrhage*. By Letellier, M.D., etc.
14. Stanley, A. F., *Uterine Hemorrhage from Hour-Glass Contraction, after the Expulsion of the Placenta*.—Maine Report. I. 5. Octob.
15. *Recherches sur la transfusion du sang*. Thèse soutenue devant la Faculté de médecine de Paris. 1858. Par Dr. P. H. Quinche, de Dijon.—L'Union, XII. 122. Oct. 14.
- *Researches on the Transfusion of Blood*. Thesis. By P. P. Quinche, M.D., etc.
16. Wheatcroft, J., on *Uterine Hemorrhage, Successfully Treated by Transfusion*.—Lancet. January.—Brit. Med. Jour. April 16.
17. Labatt, S. B., on *Treatment of Menorrhagia*.—Dubl. Jour. May.
18. Griffith, J. S., on *Treatment of Metrorrhagia*.—Med. Tim. and Gaz. January, 23.
19. Strange, W., on *the Use of Alcoholic Stimulants in Cases of Metrorrhagia*.—Lancet. April.
20. Thomas, W., *Alcoholic Stimulants against Post Partum Hemorrhage*.—Lancet. June.
21. *On Compression of the Aorta Abdominalis as a Means of Arresting Post Partum Hemorrhage*.—Monatschr. f. Geburtsk. January.
22. Breslau, on *a Case of Extremely Obstinate Menorrhagia Cured by Injections of Liquor Ferri Sesquichlorati*.—Monatschr. f. Geburtsk. Oct. 1857.—New York Jour. May.
23. Savage, H., on *Obstinate Menorrhagia*.—Lancet. Feb.—New York Jour. May.

It has been often observed, that some diseases find a more fruitful soil in certain countries than in others. Such is the case with peri-uterine hematocele, an accident considered almost exclusively by French physicians. And among these it is Dr. Puech, who has entered quite an original and ingenious way of facing the subject, while Drs. Oulmont, Nonat, Trouseau, Devalz, Genouville, and Becquerel, have issued very interesting and important articles on the nature of this singular phenomenon.

DR. PUECH remarks that the disease called peri-uterine hematocele, may take its origin from three sources. 1. From a lesion of the ovary. 2. From a lesion of the fallopian tube. 3. From a lesion of the utero-ovarian plexus. With regard to the first of these causes, he remarks that ovarian apoplexy was characterized by an afflux of blood towards the ovary, and by a partial or total destruction of the stroma, or of the graafian follicles. From the force exercised by the afflux of blood, it depends whether the membrane which encloses the ovary, is ruptured or not. If the rent opens into the peritoneum, the hemorrhage may be instantly fatal, or it may cause a peritonitis leading to death, or to an "enkystement" of the extravasated blood. If the rupture be formed towards the sub-peritoneal cellular tissue, the peritoneum is detached, and an extra-peritoneal pelvic tumor is the consequence. But as long as the outer membrane is not severed, the blood coagulates in the gland, the serum is absorbed, the fibrin remains, and the swelling may finally disappear. In other cases the ovarian apoplexy is followed by inflammation, and the pus may be discharged through the rectum, or the vagina. In the chapter which treats of retention of menses, Dr. Puech reports several cases of rupture of the uterus, or of rupture of the tubes distended with blood, that could not be discharged in consequence of an occlusion of the os uteri. Three cases are reported of propagation of the blood from the uterus into the fallopian tubes, without occlusion of the os uteri. The fallopian tube may be the seat of two different kinds of hemorrhages—one of a physiological, one of a pathological nature. If death ensues from the latter cause, the tube is found dilated only partially or to its full length, its cavity contains a vermicular clot of blood, its mucous membrane has a dark red color, while the entire organ is of a violet hue. In some instances, the tube is ruptured. The blood extravasated in the tubes, may be emptied into the uterine, or into the peritoneal cavity. This tubar hematocele has been observed in a considerable number of cases, and often in connection with ovarian apoplexy. The rupture of the utero-ovarian plexus—be it in the course of a uterine or an extra-uterine pregnancy—has the same cause, and the same termination as the thrombus of the vulva. A varicous disposition of the vessels has not been observed in the great majority of cases. The consecutive hemorrhage may be intra or extra-peritoneal—always fatal in the former, seldom fatal in the latter instance. A hemorrhage of this kind always precedes, but does not always constitute a hematocele, a name only proper for those instances, where the blood is about to become encysted. Uterine hematocele must not be mistaken for a rupture of an extra-uterine foetal cyst, an accident described by the oldest authors, and which

may be called pseudo-hematocele, the sources of a real hematocele being an ovarian apoplexy, a hemorrhage of the tubes, or a rupture of the utero-ovarian plexus.

Mr. Puech terminates his memoir on rupture of the utero-ovarian plexus, with the following conclusions : 1. Whether occurring during or independently of pregnancy, prior to or soon after delivery, the rupture of the utero-ovarian plexus is due to the same causes, and leads to the same terminations as that of vaginal thrombus. 2. A varicose condition observed in four cases, was wanting in a larger number. 3. If death does not take place from the hemorrhage, a hypogastric tumor or sanguineous cyst is produced, with the same seat, symptoms, and termination as retro-uterine hematocele. 4. Judging from the cases collected, this rupture is the most common, and the least dangerous cause of retro-uterine hematocele, and likewise it is the one which does least mischief to the generative functions. The other less common sources of this hematocele are ovarian apoplexy, and hemorrhage of the fallopian tubes.

Dr. OULMONT gives a very interesting account with a post-mortem examination of two cases of retro-uterine hematocele, both of which almost recovered under antiphlogistic treatment, when they were taken with dysentery. One of the patients died from its effects, while the other one was rescued and died afterwards from an extensive gangrenous abscess, situated near the uterus. In the latter case, both fallopian tubes were enlarged and filled with disorganized blood. This circumstance induced Dr. Oulmont to believe, that the patient had at first a tubar hemorrhage, in consequence of which one of the tubes burst, thus giving exit to the blood into the abdominal cavity. In a discussion which followed upon the exhibition of the specimens in the Société Médicale des Hôpitaux de Paris, Dr. Aran remarked that surgical interference was, generally speaking, injurious. His advice was to apply daily a large number of leeches upon the abdomen, decreasing their number gradually ; this to be continued for eight or ten days. By following this plan he had often seen these tumors lessen rapidly in size, although they never disappeared entirely. On the other hand, Drs. Barthez and Bourdon reported each a case, which was successfully treated by puncture and injections ; while Dr. Oulmont again pointed to the fatal results observed after active interference, from the practice of Drs. Nelaton, Gosselin, Vidal, and Voillemier.

Dr. NONAT lays a great stress upon the distinction of intra and extra-peritoneal hematocele. In the latter form the tumor descends between rectum and vagina, below the os tinca ; the neck of the womb is pressed against the symphysis, while the fundus uteri is somewhat elevated. By means of a speculum a violet tumor may be seen in the vagina, a symptom of great importance for diagnosis. In cases of h. intra-perit., this color is never found in the laquear vaginae, and the tumor does not come down very far, while the uterus is not pressed forward, but seems to be implanted in the tumor itself, which may be perceived surrounding the womb from all sides. This distinction is important from a prognostical and therapeutical point of view. The hemorrhages extra peritoneum are much more

favorable. The most important considerations in regard to treatment are : rest in a horizontal position, strict diet, mustard-poultices repeatedly applied to the upper extremities, softening cataplasms upon the abdomen, mercurial frictions, slight cathartics, cold water dressings upon the hypogastrium and inner part of the thighs, especially at the beginning of the disease, in order to stop the hemorrhage. In phethoric women bleeding from the veins may be repeatedly resorted to, while local blood-letting does not seem to do much good. Blisters applied to the abdomen are of service in cases where the reduction of the tumor proceeds very slowly. With regard to tapping, it is important whether the blood is deposited intra or extra-peritoneum. This operation will always prove fatal in the former instance, while in cases of extra-peritoneal hematocele, the blood has to be removed in this way, whenever urgent symptoms seem to demand our actual interference. Dr. Nonat has applied the trocar three times under these conditions, and in every single instance successfully. Like Laugier, he introduces an elastic canula through the opening made by the trocar, in order to have the fluid entirely removed, and to make injections of water or of tincture of iodine. Out of fifteen patients who came under Dr. Norat's care, only one died, and in this instance the hematocele intraperitoneum was complicated with extra-uterine pregnancy.

Dr. TROUSSEAU, in a lecture delivered at the Hotel Dieu, urges to make a distinction between catamenial and accidental hematocele. The author does not think that the blood in catamenial hematocele was discharged from a ruptured graafian follicle, but rather from the mucous membrane of the abdominal orifice of the tube. This is confirmed by the following facts : 1. In post-mortem examinations of women, who died from this accident, no lesion of the ovary is discovered (three cases of Tardieu). 2. In some instances the tubes were filled with blood (Oulmont). 3. Mucous membranes are more inclined to bleeding than serous membranes. 4. Hematocele is most commonly observed in women with an abundant menstrual flux. Accidental hematocele occurs only once in the same person, while those females, who had one attack of catamenial hematocele, are apt to have relapses of the same disease. These remarks were offered on occasion of a young lady being received in the hospital with hematoc. retro-uterina. This woman was admitted two years ago with the same complaint, and dismissed as cured.

The thesis of Dr. VOISIN contains a review of the papers published on hematocele retro-uterina, to which a series of new cases is added.

Dr. DERALZ's paper gives a good anatomical description of the utero-ovarian venous plexuses and their varices, while the second portion of the work shows the influence of ovarian varicocele upon the development of hematocele peri-uterina, which he designs as the most common source for this disease. The ovarian veins in women affected with varicocele have a decided influence upon the tissue of the ovary itself. The lesions, from this disposition, are chronic œdema and an excessive engorgement of the entire tissue of the gland, because the blood, under these circumstances, scarcely circulates in these rigid canals ; it accumulates more and more, but

especially under the influence of the menstrual congestion, near the ovarian vesicles, where it finds the least resistance. The organ thus swelled with blood, is compressed between its enlarged bulbous and the unelastic peritoneum of the small pelvis. If this compression is very considerable, the laceration of the ovary, instead of being confined to one graafian follicle, extends to several of them, in consequence of which an effusion of blood into the peritoneum is inevitable. In other cases, the wound left after the rupture of a follicle, instead of being closed up, becomes swelled and fungous, thus presenting a veritable varicose ulcer of the ovary, analogous to that of the leg.

Dr. GÉNOUVILLE's thesis on periuterine hæmatocele is a critical and historical analysis of all that has been written in France on the subject in question. The honor of having first called the attention to this disease is due to Drs. Nelaton, Vigués, and Bernutz (1848), while Trousseau, Puech, Devalz, Gallard, Laugier, and others, have contributed considerably towards the solution of the points contested. The entire article seems to be devoted to the defense of the ovarian theory against M. Trousseau, who considers a tubar hemorrhage as the principal source of hæmatocele catamenialis. Two observations are reported in favor of this theory—one of M. Guérard, and one of M. Puech. The latter had occasion to perform several autopsies of women, who died during the menstrual period. In one of these observations a clot of blood protruded from a ruptured vesicle; in the other a clot was found between the ovary and the fallopian tube, and in a third instance, it was lying in the recto-uterine cul-de-sac. The chief symptoms of the disease are a sudden pain in the lower part of the abdomen, a rapid discoloration of the skin, and a considerable decrease in the menstrual discharge. The abdominal tumor is situated generally behind the uterus, in a few instances on both sides of this organ, while the womb is dislocated upwards or laterally. Most of the women suffering from hæmatocele periuterina, had symptoms of dysmenorrhœa before the first attack of the disease, owing to a morbid condition of the ovary. The conclusions which the author draws from his researches are as follows:—1. The hæmatoceles may be divided into two classes—the catamenial and the accidental hæmatoceles—the former being more frequent than the latter. 2. All hæmatoceles are represented by hemorrhages, with a tendency to a formation of cysts. One kind takes its origin from the rupture of a blood-vessel, one from an alteration of the ovary, and, perhaps, from a hemorrhage of the trompe. 3. The treatment of this affection must be confined, with some rare exceptions, to allay the symptoms and to absolute rest.

With regard to the cause of bleeding in the first months of pregnancy, Dr. BENNET remarks that it is very often the consequence of chronic inflammation and ulceration of the womb. Therefore, it is necessary to apply the speculum in cases of this nature. If, on the contrary, the cervix uteri is found free from inflammation, and the bleeding goes on unconnected with uterine contractions, it is very probable that a mole or hydatides are present. Hemorrhages, if connected with chronic inflammation during pregnancy, have generally

a good effect upon the diseased condition of the womb, in lessening the state of congestion. Dr. Bennet is of opinion that, in all cases of returning catamenia during pregnancy, the uterine orifice is the seat of inflammatory ulcerations, so that the bleeding cannot be properly called a menstrual one. Therefore, a woman who believes herself in the family way, notwithstanding the continuance of her courses, is very likely not so, if, after careful examination, the cervix is found healthy.

DR. ROUTH's article contains an account of three interesting cases of uterine hæmorrhage. An unmarried lady had flooded considerably for some time past, but it was impossible to find out by examination the cause of the bleeding. The patient was ordered to take five grain doses of acetate of lead, with five minims of tincture of opium, some dilute nitric acid and water every hour; every night a purge of sulphate of magnesia, acidulated with sulphuric acid. This effected a perfect cure, after a host of other styptic remedies had failed. In the second case, a polypus was removed by the éraseur. In the third case, the inside of the womb was found studded with small polypi; the uterine cavity was therefore dilated, and the excrescences removed by a curette with sharp edges. After this, iodine injections, and the application of solid caustics, completed the cure.

DR. WHEATCROFT considers transfusion as the most efficient remedy we possess for subduing violent flooding. After giving a description of the operation, he remarks that the injections ought to be continued until the pulse becomes full, and the activity of the heart regular. Two cases of successful performance of the operation are reported.

DR. WHEATCROFT reports another case of successful transfusion of blood, in a woman who had a violent attack of hæmorrhage which could not be controlled, neither by the ordinary styptic remedies, nor by the use of the tampon. The entire body of the patient was cold and blanched, the pulse scarcely perceptible, the breathing gasping, great agitation, loss of sight, eyes sunk and leaden. Under these circumstances, about two pounds of blood, taken from the husband, were injected, which was followed by a remarkable change, the color returned, the eye became brilliant, the pulse was perceptible, and the agitation disappeared. With the exception of a sensation of giddiness and tightness across the brow, the patient felt quite well. The tampon was removed, and no blood was lost afterwards.

In a *discussion of the obstetrical section* of the meeting of German physicians and naturalists, on the value of Drs. Lee and Seutin's method of arresting uterine hæmorrhage, the obstetricians came to the following conclusions: By the compression of the aorta abdominalis, a contraction of the uterus is effected, and consequently hæmorrhage stopped. But in order to obtain a lasting and sufficient contraction, the compression of the aorta must be performed: 1. For a certain length of time. 2. It must be perfect. 3. Executed on the right spot, *i.e.*, above the issue of the abdominal vessels; and 4. The vena cava has to be avoided. As these cannot be accomplished in the living female, this method loses its value in practice, while its physiological basis is undeniable.

DR. BRESLAU reports the following case of hæmorrhage, cured by an intra-uterine injection. In a woman forty-five years of age, where the ordinary means had failed to stop an excessive menorrhagia, Dr. B. discovered the uterus soft, enlarged, and perfectly bent upon itself. He resolved to apply the liquor fer. sesquichl. to the inner surface of the uterus. Having first straightened the retroflected uterus, and inserted an elastic catheter as far as the fundus, he injected one ounce and a half of the liquor ferri, diluted with an equal quantity of water. The injected fluid was retained in the uterine cavity for a minute and a half, by the pressure of the fingers at the os around the catheter. During the operation, the patient felt a dull, labor-like pain, which lasted for two hours. The hæmorrhage now suddenly stopped, and was not renewed. After some days, brown crumbling clots were discharged, but no fluid blood. Seven months afterwards there had been no return of menorrhagia.

After some preliminary remarks on intractable menorrhagia, Dr. SAVAGE reports two cases, illustrating a new way of treating this complaint.

*Case 1.*—A chlorotic woman had never noticed an irregularity in the catamenial function till six months after her second and last confinement, when she began to flood, and continued to do so for eight months, with the intermission of only one week per time. Everything was tried, but in vain, by several physicians. Dr. S., on examination, discovered nothing but a slight enlargement of the uterus, which had a soft feel. Cold hip-baths, oxide of silver, Indian hemp, made but a slight impression. An injection of tannin and alum into the womb, brought the menorrhagia to an almost perfect standstill, which lasted for four months, when it returned as bad as ever. Now the cavity of the uterus was enlarged successively by sponge-tents, and the whole of its internal surface scratched away by Recamier's curette, by which only a very limited quantity of vegetations was removed, but instead a good quantity of a jelly-like white, tough, transparent mucus. The hæmorrhage first increased, but lessened considerably after half an hour, and was still less on the following day. With a view to destroy more effectually the polypoid vegetations, two injections of tinct. iod. ʒiii., at intervals of three days, into the uterine cavity were applied, after which the hæmorrhage stopped instantly. Dr. S. saw the patient nine months afterwards, when he learned from her, that the catamenial periods had been perfectly natural ever since. *Case 2.*—A pallid, debilitated woman complained of excessive loss of blood at the catamenial periods, during the past two years, since the time of a miscarriage. The uterus was soft and enlarged. The os uteri was artificially dilated, and two ounces of tincture of iodine, with two ounces of water, were injected into the uterus. The same injection was repeated every third day for a fortnight, after which the hæmorrhage ceased entirely, and the uterus began evidently to return to its right size.



## 4. TUMORS AND STRUCTURAL DISEASES.

1. Savage, Priestley, Warthington, Hall, *Cases of Successful Operations for Uterine Polypi*.—Med. Tim. and Gaz. Jan. 30.—Lancet. Jan.
  2. Hall, A., *Report of three Cases of Uterine Polypi; Successful Operations*.—Lancet. April.
  3. Shove, S., *a Case of Uterine Polypus*.—Amer. Monthly. X. 3. Sept.
  4. Beck, *Removal of a Polypus Uteri, with the Aid of Internal Remedies*.—Echo-Méd. Suisse. 2.
  5. Nesfield, St., *Excision of a Polypoid Tumor of the Uterus, with the Attached Portion of the Cervix Uteri*.—Lancet. II. Dec.
  6. Lumpe, E., *Removal of a Fibrous Polypus by the Galvanocautic Apparatus*.—Wien. Zeitschr. 35. Aug. 30.
  7. Wells, Spencer, *Cystic Tumor of the Cervix Uteri, Removed by the Ecraseur*.—Med. Tim. April 17.
  8. Johns, R., *on the Use of the Ecraseur for the Removal of Uterine Polypi*.—Dub. Jour. May.
  9. Breslau, *Extirpation of a Polypus Uteri*.—Monatschr. f. Geburtsk. XI. May.
  10. Breslau, *Removal of a Carcinomatous Vaginal Neck by the Ecraseur*.—Scanzoni's Beitr. III.
  11. Lewinsky, *on Amputation of the Collum Uteri by the Galvanocautic Apparatus*.—Wien. Zeitschr. 34. Aug. 23.
  12. *New Instrument*.—The Polypotome.—Med. Tim. and Gaz. 392. Jan. 2.
  13. Ramsey, A., *on a large Fibrous Tumor of the Uterus: Enucleation and Expulsion*.—Edinburgh, Med. Jour. July.
  14. Binz, *Fibrous Tumor of the Uterus, Weighing Sixty-Two Pounds*.—Deutsche Klinik.
  15. Sloane, J., *Gastrotomy for the Removal of a Fibrous Tumor of the Womb; Death*.—Brit. Med. Jour. Feb. 27.
  16. Cazenave, J., *Differential Diagnosis of Polypus and Inversio Uteri*.—Jour. de Bord. April.
  17. Cremen, *on Hydatids of the Womb*.—Dubl. Jour. May.
  18. Taylor, T. M., *Removal of a Tumor from the Neck of the Womb, formed by a Portion of the Membranes, Thirty-Six Hours after Delivery*.—Amer. Jour. April.
  19. *Der Gebärmutterkrebs. Eine Pathologisch-Anatomische Monographie*. Von Dr. Med. Ernst Wagner. Privatdozent an der Universität zu Leipzig. Mit 3 Tafeln in Stahlstich. Leipzig: B. G. Teubner, 1858. gr. 8vo. pp. 169.
- *The Cancer of the Womb, Being a Pathologico-Anatomical Monograph*. By E. Wagner, M.D., Lecturer at the University of Leipsic. Leipsic, B. G. Teubner, etc.

20. Wagner, E., *Remarks on Tumors of the Uterus*.—Arch. f. phys. Heilk. I. pp. 504.
21. Keiller, A., *Removal of a Cancer of the Neck of the Uterus by the Écraseur*.—Edinburgh, Med. Jour. April.
22. Isaacs, C. E., *Case of Cancroid Ulcer of the Os Uteri—Excision of the Entire Cervix—Recovery*.—New York Jour. IV. 1. January.
23. Schuh, *Cauliflower-Excrescence of the Cervix Uteri and of the Vagina, Removed by Galvanocaustic*.—Oesterr. Zeitschr. f. prakt. Heilk. IV. 42. Oct. 15.
24. Armstrong, *on Cauliflower-Excrescence of the Womb*.—Brit. Med. Jour. January, 16. pp. 51.
25. Laurence, L., *on Rodent Ulcer*.—Med. Tim. and Gaz. 436. Nov. 6.
26. Parker, L., *on a Syphilitic Disease of the Uterus*.—Brit. Med. Jour. May.
27. Namias, G., *on Tuberculosis of the Womb and its Appendages*. Venezia. In 4. (Con Tavola.)
28. Cooper, H., *Case of Rupture of the Uterus in the Third Month of Pregnancy, from Tubercular Degeneration of the Fundus*.—Brit. Med. Jour. Oct. 9.

Dr. WAGNER's work on cancer uteri deserves the greatest attention of the profession, and we believe that the researches and expositions, laid down in these pages open a new era for the study of cancer uteri. If we must consider Dr. Virchow as the path-finder for the new genesis of structural metamorphoses, we must consider Dr. Wagner as his most clever interpreter with regard to uterine cancer. Prof. Virchow is the man, who, with one stroke, annihilated Dr. Swann's and Vogel's theory of blastema, which up to the present day was the turning-point of our pathological researches. The formation of cells out of a blastema was a theory, Dr. Virchow's "*omnis cellula e cellula*" is a well demonstrated fact.

The new methods for the removal of tumors, viz.: the écraseur and the galvano-caustic apparatus, have been applied very successfully this year in a number of unusually difficult and complicated cases.

Dr. HALL reports three cases of uterine polypi, successfully removed by ligature. In one of them ergot was given at every menstrual period for eight months, by which contrivance the polypus was expelled from the womb so that it could be reached by the instruments.

Dr. LUMPE's very instructive article gives a striking representation of all the difficulties connected with the operation of tying a polypus. Although everything was tried, and a very ingenious apparatus was purposely constructed to bring the cutting loop around the body of the polypus, it could not be effected, and therefore the tumor had to be removed in two sessions, first its lower and then its upper segment. Another trouble, almost worse than the first act of the operation, was the removal of the first portion from the vagina,

after it was cut off with the burning loop. At last it was removed, but not without rupturing the perineum up to the sphincter ani. The patient was a virgin, and the polypus of unusually large size, extending the vagina to its utmost capacity.

Dr. BRESLAU's case of *écrasement linéaire* is instructive, inasmuch as it shows the necessity of applying the instrument as remote as possible from the healthy tissue, in order not to injure the vagina or bladder. After the patient had been chloroformed and placed in the position for lithotomy, the diseased portion was fixed by several hooks and a forceps of Museux's, and the uterus pulled down so that the tumor came in sight. Now the chain of the *écraseur* was placed around the tumor, so that it was situated right in the middle between the diseased and the healthy portion. The time consumed for the removal of the degeneration was about twenty minutes. But an examination of the excised growth showed, that a portion of the vagina had been cut away with it, and consequently a hole of considerable extent was found in the anterior vaginal wall, through which a portion of the intestines protruded. After the vagina had been thoroughly plugged, the patient was placed in bed and put under the influence of opium. The rent in the vagina, although at least one inch in diameter, closed entirely, and the patient recovered very fast considering the circumstances.

Dr. LEWINSKY, after a short historical synopsis of the methods in use for the removal of the vaginal portion, remarks that the principal advantage of the galvano-caustic method with Middeldorf's apparatus was not the absence of hemorrhage, but rather the possibility of easily removing the collum uteri, without bringing it down before the os externum. The author believes that by pulling down the uterus, the peritoneal folds constituting the *spatium Douglasii* might be possibly injured by over extension, or peritoneal adhesions severed from their place of insertion. The peritonitis often observed after this procedure may be owing to this expansion of the peritoneal membrane. An illustration of this incidence is mentioned by Scanzoni (*Lehrbuch krankh. d. weibl. Sexualorgane*, p. 254), occurring in a patient who had undergone the operation just mentioned. After death a rent two inches long was found running across the lowest section of the *spatium Douglasii*. Two similar cases are reported by Mikschik. Therefore every method of amputation of the neck, which demands a previous dislocation of the womb, is an unsafe proceeding. Added is the history of a case, where the vaginal neck was removed by galvano-caustic, for a papilloma portio-nalis vaginalis (*Clark's Cauliflower excrescence*).

A new instrument intended to facilitate the operation of removing broad-based uterine polypi has been invented by Dr. LEVER. It consists of a semicircular blade, cutting by its concave edge, which plays freely round a circular joint, placed at the end of a shaft five and a half inches long, when worked by a trigger and thumb piece, which pushes a slide and lever acting on the blade forward and back, the edge of the blade being then passed over the part which is to be excised; the operator may now make gentle traction by means of the handle, while by pulling the trigger he causes the blade to

sweep forward with a cutting movement, for about one and one-eighth inches. The instrument now becomes a cutting hook; the operation may now be completed with this hook by simple traction, or, if the base be too broad for this to be done, the lever may be withdrawn with the thumb, and the first step of the operation repeated.

A primipara, under the care of Dr. RAMSEY, was delivered in a natural labor, of a healthy child, when the doctor in the act of removing the placenta, detected a large intermural tumor. An exploring needle was introduced for diagnosis, but no fluid escaped. The opening of the trocar, after some days, was found considerably expanded so as to admit the point of the forefinger, by which the opening was gradually enlarged, and separation was effected fully  $3\frac{1}{2}$ " around it in all directions, except that a thick and strong fibrous band extended from the lower and back part of the tumor to the anterior lip of the os uteri. This band was afterwards divided by the urethrotome. Five days afterwards the tumor came away on its own account; it was a large flaccid mass, of about  $2\frac{1}{2}$  lbs., with a strong white investing membrane on all its surface, except where its attachments had been separated by direct interference.

The following is an abstract of Dr. WAGNER's monograph on uterine cancer: Cancer of the womb is represented by different forms, viz. —1. Primary cancer (of the vaginal portion; of the cervix or body of the womb, without or with subsequent affection of the vaginal portion). 2. Cancer communicated to the womb from neighboring organs. 3. Cancer of the womb originating simultaneously with cancer of other organs. 4. Secondary cancer of the womb.

As to the different characters of cancer, it may be divided into scirrhus, carcinoma medullare, epithelial, and colloid cancer.

*The primary cancer of the vaginal portion* is more frequently met with than all the rest taken together. Its structure is generally an intermediate form between scirrhus and carcinoma. Very often the carcinoma contains large microscopical alveols (cancer pultacé aréolaire). Epithelial cancer is of rare, genuine scirrhus, of very rare occurrence, while alveolar cancer is the least frequent of all. All these different forms may combine with the formation of small or larger tufts on the free surface of the vaginal portion, in which latter instance it represents the so-called cauliflower excrescence (Clarke). [The writer does not think Dr. Wagner justified in counting the cauliflower excrescence among the cancerous growths. To say the least, this point is not yet decided, neither in an anatomical nor in a practical point of view.—E. N.]

Cancer of the vaginal portion takes its origin very likely as often from the anterior as from the posterior lip. It is difficult to give a decision on this point, as the chance to examine cancer of the womb at its early stages is very seldom offered. It seems to be a settled fact, that cancer of the vaginal portion does not start from the mucous follicles, but rather from the areolar tissue between the muscular fibres. This at least is the result of Dr. W.'s researches from a considerable number of microscopical examinations. In all the cases examined, the glandular organs were not diseased; in most instances the cancer had a greater extension in the muscular portion than in

the lining membrane. The *carcinoma medullare* appears, in its first stages, as an infiltration of the vaginal portion, with a white, hard, cartilaginous, or a loose, encephaloid substance, in which the original tissue disappears. The cancerous infiltration of the vaginal portion, after some time, proceeds towards the *neck of the uterus*, generally seizing upon its entire length and thickness. In the greatest number of cases the affection comes to a stand-still at the orificium uteri internum, while in some instances the body of the womb itself is taken. Sometimes smaller or larger cancerous deposits are found distributed in the body on different points, independent of the primary infiltration of the lower uterine segment. The decay of the cancerous infiltration consists partly of the common softening, partly of its gangrenous destruction. In the latter instance it looks sometimes like a primary uterine gangrena.

After the mollification has begun, the vaginal portion is covered with superficial or deep ulcerations; at a later stage the vaginal portion has entirely disappeared, representing one extensive ulceration, covered with a dirty, grayish fluid. In other instances the entire cervix is wanting, so that the body alone is being left. Cases of this kind have been taken for *ulcus corrodens* (phagedænicum) uteri.

[The author is of opinion that most cases recorded as *ulcus phagedænicum* are nothing but secondary stages of cancer, and only very few authors (Rokitansky, Walshe, Ashwell, Förster) sustain its specific character. We are surprised to find that Dr. Wagner does not mention a well established fact, viz., that by far the greatest number of so-called corrosive ulcers are of a syphilitic nature.—E. N.]

In some few cases the entire uterus, up to its vertex, was destroyed.

Généraly, the simple mollification is combined with so-called *moist gangrena*, partly as a consequence of disturbed circulation and nutrition of the cancer and the original tissue, partly from a putrification of the cancerous fluid, being exposed to the air.

The gangrenous places of the ulcerated surface are covered with a thin, stinking, yellowish or greenish fluid. Sometimes the surface of softened cancerous deposits, or of the gangrenous tissue, is covered with warty, granular, and very vascular excrescences, which are often hidden under a layer of pus, blood, or ichor. These secondary growths have to go through the same process of softening or gangrenous destruction as the original cancerous infiltration. The consequences of softening and sphacelous, are hemorrhages from the ulcerated surface, cancerous cachexy, secondary diseases (peritonitis, thrombosis), and, perhaps, a more rapid development of the cancer.

In very rare instances the gangrenous process comes to a certain line of demarcation, probably owing to a formation of pus in its neighborhood, and representing one form of the so-called partial self-healing of some authors. The *spontaneous healing* of uterine cancer is very dubious. Only very few observations (Rokitansky, Kiwisch, Schuh, Bochdalek) deserve the attention of the profession. Among the varieties of cancer which are rarely met with, may be counted the epithelial cancer. Dr. Wagner saw this form only twice among

twenty-five cases. This is at variance with the opinion of many authors, and of Virchow especially, who holds that the greatest number of uterine cancers belong to the epithelial form. Dr. Wagner thinks that Virchow's canceroid is not an epithelial cancer, properly so-called, but only a variety of carcinoma containing alveols, with a regular disposition of the peripheric cells. As long as this point is not cleared up, the discussion about its frequency cannot be settled.

The real *scirrhus* is seldom found in the vaginal portion. But, generally, a harder form of carcinoma is called *scirrhus*; and as many cases of hypertrophy, induration, and fibroid have been described as *scirrhus uteri*, it is very difficult to decide as to its frequency.

Of *gelatinous* cancer only some few cases are known. The author gives the details of some cases, which came under his own observation.

Among the *changes to which the non-cancerous portion of the uterus* is subjected, whether before the cancer manifested itself, or after its appearance, *hypertrophy* of this organ is most often met with. It consists of a uniform increase of all the tissues of the uterus, but more especially of the inter-muscular areolar tissue. In some exceptional cases, the superior non-carcinomatous portion of the womb is of normal size, pale, flabby, and extremely soft. The mucous membrane lining the non-affected portion, shows in most instances the different forms of *catarrh*. *Fibroid* tumors are often found together with cancer uteri. The *serous membrane* of the womb exhibited, in all the cases examined, *adhesions* and *false membranes* of different shape and size, in consequence of which the womb is attached more or less to its neighboring organs.

*Primary cancer* of the *vaginal portion*, involves almost constantly a smaller or larger portion of the *vagina*, where it retains its original character. In very exceptional cases, cancer of the *vagina* has been observed, without any immediate connection with the uterine affection.

*Cancer of the bladder*, propagated from the *vagina*, is of frequent occurrence (38, p. c.).

*Secondary cancer of the rectum* is not so frequently met with as that of the bladder (16 p. c.), and generally that portion of the rectum is taken, which is situated opposite the superior third of the *vagina*.

Carcinomatous vesical, vaginal, rectal fistulæ, and so-called carcinomatous cloaks, are not frequently met with (3 or 4 p. c.). Cancer of the *ovaries* and the *fallopian tubes* is not unfrequently met with, but mostly in those cases where the fundus uteri has been affected. The *areolar tissue around the uterus and the small pelvis* is very often carcinomatous, thus propagating the disease from its original location to the neighboring organs (bladder, rectum, urethra, pelvic muscles, periost, and bones of the pelvis). As a consequence of carcinomatous infiltration of the areolar tissue around the womb and *vagina*, may be considered the immobility of the womb, important in a diagnostic point of view.

*Cancer of the urethers* is pretty often found, its location being generally at their lower terminus.

*Carcinoma of the lymphatic glands* may be found in about half the number of cases of primary cancer of the vaginal portion, of which the glands of the pelvis (plexus iliacus externus, plexus hypogastricus, plexus sacralis medius and those in the immediate neighborhood of the womb, ligamenta lata, etc.), take the greatest share. The carcinomatous infiltration of these glands is most often coincident with a considerable extension of the uterine cancer, and when it is far advanced in the process of destruction. This fact is explained by the intimate connection of the lymphatics with the cells of the areolar tissue. Cancer of the *inguinal* and *mesenterial glands* belong to the *secondary* affections, as they are in no direct communication with the diseased womb. Cancer of lymphatics has been found in some rare instances. In some cases the carcinomatous deposits in the *liver* are so numerous, that the symptoms of the disease seem to point more towards an original affection of the liver, than of the womb.

Cancer of the *blood-vessels* is of very rare occurrence, a few cases of cancer of the veins are recorded. It is very remarkable that the smaller arteries and veins, running through cancerous portions of the womb, have been found unchanged in structure. The spreading of the cancer towards the neighboring organs does not at all follow the course of the blood-vessels or lymphatics. Before the intimate structure and connection of the areolar tissue and its cells were sufficiently known, this fact could not, by any means, be explained satisfactorily.

From these researches, the great frequency of the propagated and of the secondary cancers becomes evident, a fact generally disbelieved by other authors. Altogether, uterine cancer offers many points of comparison with cancers of other (hollow) organs, in the composition of which organic muscles take a prominent part (œsophagus, stomach, intestinal canal).

The *non-carcinomatous diseases* originating from cancer of the vaginal portion, are of equally great clinical and anatomico-pathological importance, and many symptoms in a case of cancer uteri are derived from these consecutive diseases, while the fatal result is very often owing to these secondary non-cancerous affections.

One of the most common diseases in consequence of cancer uteri, are the *peritonitides*, which are often localized, and of an adhesive nature. These seizing upon the peritoneum in its full extent, are almost always of puriform or septic character. The latter are most often caused by the softening or decaying of the carcinomatous infiltration, and are found mostly connected with perforation of the peritoneum, though general peritonitis is not always the consequence of this accident, but of other diseases (Cystitis, dilatation of the urethers, croup of the rectum, etc.)

The *diseases of the blood-vessels*, especially of the *veins*, are the most frequent non-carcinomatous diseases occasioned by cancer uteri, and, above all, *thrombosis of the veins*, the cause of death in one third of all cases. The veins most commonly affected, are the *venæ uterinales*, *vesicales*, *hypogastricae*, *iliacæ communes et crurales*. This thrombosis is most frequently owing to a pressure of the carcinomatous

areolar tissue of the pelvis, and of carcinomatous lymphatic glands upon the medium-sized veins. This may be concluded from the fact that these three conditions are remarkably often found combined. Besides this compression—thrombosis, *Virchow's* marantic thrombosis is very often met with. It has its foundation as well in the general marasmus, which almost constantly follows the last stages of uterine cancer, as in the diminished activity of the heart, which is partially owing to fatty degeneration, partially owing to the violent hæmorrhages from the genitals. In other instances, many thromboses are the consequence of a dilatation of the rectal, uterine, and vesical veins, or of a purulent inflammation of the vessels. The results of these thromboses are: œdema of one or both legs; purulent destruction of some portion of the cellular tissue; a more rapid softening or gangrena of the superficial layers of the cancer; ascites; occlusion of the arteria pulmonalis, with consecutive œdema pulmonum, or lobular infiltration of the lungs, or pneumonia; infarctus of the spleen, liver, and kidneys. Other non-cancerous diseases, in consequence of cancer uteri, are: inflammation of the heart and the vessels; inflammation of the pericardium; inflammation of the endocardium; inflammation of the lymphatics; acute hypertrophy of the lymphatic glands in almost every case; chronic bronchitis, with emphysema of the lungs; inflammation of the rectum; dilatation of the urethers and hydronephrosis, owing to a compression of the urethers by cancer of the pelvic areolar tissue, or by cancer of the lymphatic glands of the pelvis; other causes are cancer of the bladder, cancer of the lower end of the urether, cancer of the entire uterus, with considerable hypertrophy; cancer of the retro-peritoneal glands; acute purulent nephritis and morbus Brightii; diseases of the bladder; diseases of the urethra; œdema and ascitis; diseases of the bones (erosiones, caries, osteomalacia); tuberculosis of the lungs.

*Primary cancer of the neck of the womb* is exceedingly rare. Three cases are reported (Cruveilhier, Brachet, Virchow).

*Primary cancer of the body of the uterus* is also very seldom observed. The body of the womb is generally more or less hypertrophied, the inner layers of which seem to be mostly affected. One or both tubes are degenerated at their lower end; in some cases carcinoma of the ovaries was observed, in some carcinoma of the retroperitoneal and mesenteric glands, of the pelvic cellular tissue, of the peritoneum, bladder, rectum, intestines.

*Cancer propagated upon the uterus from neighboring organs* is the most frequent form of cancer of the uterus after the common cancer uteri. Its starting point is generally in the vagina,—not so often in the cellular tissue between uterus, vagina and bladder, or between vagina and rectum—in the other pelvic cellular tissue; in the ovaries; in the bones of the pelvis; in portions of the intestinal tube; in the bladder and rectum. This secondary uterine cancer is always a so-called cancerous infiltration.

*Cancer of the uterus forming at the same time with cancer of other organs.* A few cases are known where cancer of the mamma or the ovaries originated jointly with cancer of the womb (Rokitansky).



*Secondary cancer of the womb.* It happens most often after cancer of the mamma and ovaries, in some instances after cancer of the œsophagus, stomach, intestines, liver, lungs etc. It is generally represented in the form of one or more small knots, and most commonly found in the serous membrane of the body of the womb.

*Microscopical disposition of cancer of the uterus.* Cancer of the womb is almost always a so-called infiltrated cancer; i. e. in the tissue of the organ are deposited alveoli, filled with the cancerous juice, so that in most instances no formation of so-called cancerous stroma is present. If stroma is found, it always retains the character of a mere hypertrophy of the intermuscular areolar tissue, so that the original structures are not considerably altered.

The cancerous alveoli are almost constantly found deposited in the areolar tissue, connecting the muscular bundles, never inside of them. From that point they spread in every direction, especially towards the substance of the muscles themselves, not so much towards the inner or outer surface of the organ, so that its lining membrane is often found intact in a far advanced stage of the disease. The areolar tissue near by very large alveoli, does not exhibit a very decided fibrous structure, its corpuscula are small, losing their cellular appearance, and looking more like nuclei. These changes are the consequence of a pressure arising from the growing alveoli.

These alveoli offer different types of construction in different forms of cancer.

1. Inside the normal or very little altered tissue of the uterus, as well in its muscularis, as in its mucous membrane, or in the subserous and serous tissue are found alveoli of a glandular, tubular, jagged, ovoid, or spherical form. The shape of these alveoli depends partly from their mother organ (*corps fibro-plastiques*) partly from the disposition of the neighboring muscular layers, or from the quantity and situation of the alveoli themselves. The alveoli are closed up from all sides and seemingly limited by a *membrana propria* (the condensed border of the areolar tissue). They contain chiefly cells, very seldom an intercellular substance (cancerous serum). Those cells, situated near the periphery of the alveoli are of a more or less cylindrical form, and a regular disposition like cylindric epithelium. They are generally in intimate connection with the alveolar margin. The central cells have no exact shape, being polygonal, ovoid or round. Sometimes the centre contains nothing but nuclei. The increase of the cells proceeds very likely from the cellular layer near the alveolar margin: this is proven by the absence of mother cells in the central part, and by the presence of cells with double or more nuclei and dichotomic cells in the peripheric portion. This is confirmed by the observation, that the fatty metamorphosis and decay of the cells does begin in the central portion. The growth of these alveoli follows up the line of the cellular fibres. Still they increase not only in a longitudinal, but in several directions, by branching out in one or more points. The larger alveoli very often contain smaller compartments. The intra-alveolar partition-walls consist of fibrous or homogeneous cellular tissue, with several knots, which corresponded, perhaps with the location of the formerly existent cor-

puscula of the cellular tissue. The framework itself is very likely not of recent formation, but a residuum of the normal, atrophic tissue, resulting from the formation of very numerous alveoli in a small circuit. The alveoli have no connection whatever with the normal glands of the mucous membrane of the womb, they originate from an endogeneous growth in the corpuscula of the cellular tissue. This is the most common form of cancer uteri. The same structure is exhibited in some cases of cancer of the stomach and liver.

2. The cancer aréolaire pultacé (Cruveilhier) is no particular form of cancer, but offers the same anatomical structure under the microscope as that described above. The thick juice which may be squeezed out of it, à manière de vermisseeaux, consists of decayed cells, nuclei, albuminous and fatty molecules, with a slight admixture of cholesterin.

3. The common carcinoma is not found in the uterus, as often, as the first mentioned variety. Its alveoli are seldom very large; their shape is not so very regular as quoted by the majority of authors. Its alveoli contain at times very little, at times a considerable quantity of serum. But, in numerous cases, the cancerous serum is, for its greatest portion, an artificial production, owing to a bursting of the softer cancerous cells, by manipulation or addition of fluids for microscopical examination. The cells of the carcinomatous serum, *i. e.* the so-called cancer-cells, are in many cases single, being located side by side, without any further connection, while in other instances two or more of them are firmly coherent with each other. This is perfected by the pointed or broad branches, especially of the famous cellulæ caudatæ. In the common carcinoma the contents of the alveolus seem to have no other connection with its stroma, than the contents of a serous cyst with the wall of cyst. Still, in many cases, the intra-alveolar cells are in an intimate connection with the wall of the alveolus, with which they are firmly united.

4. Of so-called scirrhus uteri, only one case came under Dr. Wagner's notice. The cellular tissue was considerably increased in quantity, denser, with fewer nuclei and fibro-plastic corpuscula. The muscular stratum between it could not be detected by the eye, while it appeared under the microscope, in some places, changed in fatty degeneration. The very few alveoli present were generally of a large size. Their cells were partly unchanged, partly atrophied.

The *development* of the cancer from fibro-plastic corpuscula, the author could trace in almost all cases of cancer uteri examined: all the different stages, from the undeveloped corpusculum up to a mother-cell, with many nuclei and alveolus, could be traced.

The *mollification* of the cancer proceeds from the most superficial portions, and is altogether the same process going on in cancers of the skin and mucous membranes. Its nature is not yet sufficiently explained; it very likely consists in a rapid growth of the cancerous cells, and a copious increase of the so-called cancer-serum, which is the result of a stasis of the venous blood in most cases. During the softening process of cancer, the cells undergo several modifications, among which the *difffluence* of the cells is the most important. While suffering this metamorphosis the cells become somewhat

larger and more spherical ; the cellular membrane is less distinct, thinner, disappearing at last entirely ; the contents of the cell become more transparent and copious ; the molecules are lying at a greater distance one from another ; next the nucleus and nucleoli undergo the same metamorphosis.

In very rare instances Dr. Wagner observed the so-called *mucous metamorphosis of the cancerous cells*.

The *fatty metamorphosis of the cells* is of frequent occurrence, but is altogether of very little influence upon the development of the cancer. The degeneration starts from the centre of the alveoli, from whence it proceeds towards the periphery.

The *atrophy or tuberculization* of the cancerous cells is found alone, or combined with the other metamorphoses. Its microscopical characters present nothing extra in cancer uteri.

*Effusions of blood* into the cancerous deposits are often observed. Abundant apoplexies are doubtless one of the causes of gangrena cancri.

*Formation of pus* is often found on the surface of cancerous ulcerations ; its origin is not known. In some cases granular growths were observed very much like those of common ulcers in the skin.

The microscopical characters of non-primary cancer of the womb are not yet sufficiently known, but very likely they do not differ much from primary cancer of the vaginal portion.

—This is in short an exposition of the different topics treated of in Dr. Wagner's thesis ; it is replete with very numerous microscopical examinations ; replete with the best of previous literature ; replete with practical hints, and altogether written in a strictly scientific and elegant style. We seriously recommend it to everybody who takes an interest in the progress of pathological anatomy and gynaecological science.

Dr. ISAACS removed the entire cervical portion of the uterus, transformed into one mass of cancrioid ulcer by the knife, after which operation the severe dragging pains, and other symptoms referable to the uterus disappeared entirely. Dr. Isaacs is of opinion that the operation will be permanently successful, as cancrioid cancer is less liable to return than any other form of malignant disease.

Of the three cases of cauliflower excrescence reported by Prof. SCHUH, which were removed by galvano-caustic, one recovered, one died from peritonitis, owing to a perforation of the peritoneum, near the spatium Douglasii, occasioned by the caustic wire. In the third case the operation was followed by a severe cystitis and peritonitis, from which the patient ultimately recovered.

Dr. LAURENCE gives an account of a rodent ulcer, with a post-mortem examination. Os and cervix were completely destroyed, the remains of the organ of normal size, its tissue somewhat soft and pale, but not infiltrated by any morbid deposit. The lining mucous membrane of a deep claret hue, and of a pulpy consistence. The author holds, that this affection is not of a cancerous or cancrioid nature, but a disease sui generis. An important symptom during life is the state of mobility of the uterus, a condition never present in a cancerous affection.

A case is reported by Dr. COOPER, where a woman died suddenly in her third month of pregnancy. On post-mortem examination the body was found very plump and well nourished, having nearly two inches of fat on the abdominal parietes. The uterus was found to be ruptured at the left angles of the fundus. The wall of the uterine fundus was so thin, that the part of the placenta remaining in the cavity could be distinctly seen through it. The proper structure of this part of the uterus was converted into a friable, cheesy, or curdy mass, which rubbed away readily under the finger. At the part of the fundus above indicated, this change had gone on till only the membranous investment was left, and in one part even this had given away and produced the catastrophe. The cervix was quite healthy and closely contracted. The lungs were not examined.

## VI. PATHOLOGY OF BLADDER, VAGINA, AND EXTERNAL GENITALS.

1. *Silver Sutures in Surgery.* The Anniversary Discourse before the New York Academy of Medicine, etc. By S. Marion Sims, M.D., Surgeon to the Women's Hospital. New York: Samuel S. and William Wood, 1858. 8vo. pp. 79.
2. Bozeman, N., *Case of Vesico-Vaginal Fistula, with Anteversion and Incarceration of the Cervix Uteri in the Bladder. Replacement of the Uterus and Closure of the Fistulous Opening, by Means of the "Button Suture."*—Communicated with Remarks by Alex. Keiller, M.D.—Edinb. Jour. XL. Oct.
3. Wells, Spencer, *Urethro-Vaginal Fistula; Cure by Silver-Suture.*—Med. Tim. and Gaz. 431. Oct. 2.
4. Brickell, W., of New Orleans, *Two Cases of Vesico-Vaginal Fistula Cured.*—New Orleans Med. News. V. 9. Nov.
5. Toland, H. H., *Vesico-Vaginal Fistula; Operation and Cure.*—Pacific Jour. I. 4. April.
6. Brown, J. B., *Three Cases of Vesico-Vaginal Fistula.—Cured.*—Med. Tim. and Gaz. April 17.
7. Herrgott, *Two Cases of Vesico-Vaginal Fistula; one Cured by Suture and Cauterization; One Healed Spontaneously.*—Gaz. de Strasbourg. 4.
8. Esmarch, *on Operation of Vesico-Vaginal Fistula.*—Deutsche Klin. 27. 28.
9. *Two Vesico-Vaginal Fistulæ in the Same Patient; Operation; Cure.*—Med. Tim. and Gaz. Sept. 18.
10. Simon, G., *the Treatment, of Fistula Vesico-Vaginalis, and Vesico-Uterinalis.*—Monatschrift f. Geburtsh. July.
11. Simpson, J. Y., *Iron-Thread Sutures and Splints in Vesico-Vaginal Fistulæ.*—Med. Tim. and Gaz. 440. Dec. 4.
12. Savage, *on a Mixture of Collodium and Castor Oil for Relieving the Excoriations in Cases of Vesico-Vaginal Fistula.*—Med. Tim. and Gaz. Jan. p. 119.—Med.-Chir. Mon.-Hefte. Sept.

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15. Wells, S., on *Dilatation of the Female Urethra by Fluid Pressure*.—Med. Tim and Gaz. 421. July 24.
16. Farre, A., on *Exfoliation of the Epithelial Coat of the Vagina*.—Beale's Archiv. of Med. II.—Brit. Rev. XLIV. Oct.
17. Schmidt, E., on a *Case of Traumatic Occlusion of the Vagina*.—Chicago Jour.
18. Corse, on *Cancer of the Clitoris; Operation*.—Transactions of the Philadelphia College of Physicians.—Amer. Jour. LXXII. Oct.
19. Falloon, Edw. L., *Adhesion of the Labia after Delivery*.—Lancet. June.
20. Baker, Brown, T., *Ten Cases of Ruptured Perineum Cured by Operation*.—Med. Tim. and Gaz. 420. July 17.
21. Erichsen and Adams, *Cases of Successful Restauration of the Perineum after Baker Brown's Method*.—Lancet. April.
22. Storer, H. R., *Adaption of the Clamp and Button Suture to Pro-lapse of the Vagina*.—Amer. Med.-Chir. Review. January.
23. Schultze, B., on *Rupture of the Perineum*. (With Plates.)—Mon.-Schrift f. Geburtstk. XII. 4. Oct.
24. Mattei, on *Laceration of the Perineum*.—Prag. Viertelj. Schr. October.
25. Moreland, W. W., *Laceration of the Perineum During Labor; Operation, etc.*—Boston, Jour. LIX. 16. Nov. 18.
26. Priestley, W. O., on a *Peculiar Form of Laceration of the Perineum During Labor*.—Med. Tim. and Gaz. 429. Sept. 17.
27. Breslau, *Incontinentia Urinæ—Cured by the Removal of Both Hypertrophied Nymphæ*.—Scanzoni's Beitr. B. 3. 1858. New York Jour. Sept.
28. Breslau, *Recto-Vaginal Abscess; Recto-Vaginal Fistula; Spontaneous Closure of the Opening*.—Mon.-Schr. f. Geburtstk. XI. May.
29. Ladreit de la Charrière, on *Cysts Developing in the Vaginal Walls*.—Arch. Gen.
30. Lüders, *Removal of a Pessary from the Spatium Douglasii, where it had been Implanted and Formed strong Adhesions for several Years*.—Deutsche Klinik, 10.

This is the age of scientific wire-pulling. In former times they were accustomed to use leaden wire—now, in our country, the silver wire is universally tried, while on the other side of the Atlantic they begin to show a predilection for the cheaper metal, viz.: iron wire. The question arises, whether this occupation will be finally beneficial to suffering humanity or not? We are happy to be able to reply in the affirmative. We have received already numerous accounts of successful operations for vesico-vaginal fistula. A large number

of cases which had been abandoned as incurable, were taken up with renewed energy, and many an unhappy woman has found permanent relief, who would have been condemned to constant misery, had it not been for the excitement produced by the wire. And still this blessing is not due to the wire alone. Awakened energy of the operators effected the work. The same seemingly happy results have been obtained in former times by the silk; but these have been forgotten. The account of operations given by Langenbeck, Dieffenbach, Kiwisch, Wutzer, Simon, Maisonneuve, can boast of the same success, of the same average number of cures, although they made use of the silk-suture.

The chief advocate of this modern doctrine is Dr. Sims, of this city. His views on the subject are fully expressed in his anniversary discourse before the New York Academy of Medicine. It contains some very interesting facts, while the spirit which pervades the whole work forcibly reminds us of the times of Oliver Cromwell. The speech opens with an anathema against Dr. Bozeman, which reveals a good deal of deep malice towards a man of generally acknowledged merits, a malice strangely contrasting with the ardent godliness displayed in the rest of the work. After declaring that "the use of silver as a suture is the great surgical achievement of the nineteenth century" (sic!) the author proceeds to present the proper method of using it for the cure of vesico-vaginal fistula. It is called a "clamp suture" on account of its method of action, in clamping firmly together the surfaces to be united. By perforated shot, compressed upon the silver wires, they are secured to leaden cross-bars, or "clamps," which burrow in the vaginal tissue; the whole remaining till union by first intention becomes firm, when, by clipping off the shots, the sutures are removed. Dr. Sims insists upon passing the sutures so far from the edges of the fistula, that the cross-bars would burrow in the vaginal tissue. Lately Dr. Sims has discarded the clamps and shot, securing the suture by simply twisting the wire. The wire must be made of virgin silver, annealed, and small enough for a suture. In the majority of operations about the vagina, it is better to pass silk ligatures first, and with these to draw the wire after. The sutures should be passed in near the edge of the fistula, taking care to embrace the whole denuded surface, but not to penetrate the mucous lining of the bladder. They should, in general, be about  $\frac{1}{16}$  of an inch apart, and each tied separately, by twisting the two ends of the wire together, then cutting them off, and leaving the twisted ends at least half an inch long, to facilitate their removal. But the most useful improvement, says Dr. Sims, is in the position of the patient during the operation. A few require to be placed on the knees with the head and thorax depressed, but in the great majority of cases the patient may lie on the left side, while the operation will be executed with equal facility to the surgeon, and of course with more facility to the patient.

With regard to the importance of silver sutures applied to injuries of the vagina, Dr. Sims remarks: "Before this discovery, operations for vesico-vaginal fistula were often attended with risk of life, while a cure was a mere accident." This bold assertion can only find its

explanation in the following words on page 48: "I investigated the case (of fistula vesico-vaginalis) thoroughly, reading every author I could find on the subject, but to no purpose, for all was darkness and confusion." The writer is of opinion, that even a man living as far south as Alabama, should not commit himself to the acknowledgment in such plain terms of his utter ignorance of previous literature. But when words like these are pronounced in the city of New York, before such a learned body as the Academy of Medicine; when this is expressed in the midst of a professional community, in possession of every facility for literary instruction, we can only say, *si tacuisses*——. If Dr. Sims had taken the trouble to look at the *Deutsche Klinik*, or *Prager Vierteljahrsschrift*, or *Monatsschrift für Geburtsh.*, or Kilian's *Operative Midwifery*, or *La Gazette des Hôpitaux*, or one of the *English Reviews*, or even the *American Journal of Medical Sciences*, he would have been easily convinced that every thing he has proposed with regard to this operation was known to others before him. Neither the needle-holder, nor the speculum, nor the position of the patient, nor the results obtained by his way of performing the operation, are new attainments. The only new proposition remaining, is the word "silver," instead of silk, lead, or gold.\* The writer of this was assistant-surgeon to the surgical and obstetrical department of the clinic of the University of Bonn, in 1850, and during this time ample occasion was offered to witness the mode and results of Prof. Wutzer's operations, which are published in a great number of German and English journals. These are so much like those laid down in the pamphlet before us, that Wutzer himself could not have described them more accurately. Wutzer's position of the patient is entirely the same; he formerly used the same needle-holder, which is now exchanged for a more useful instrument; his speculum represents the same idea, while it allows of even a more spacious development of the vaginal sac, as it consists of three instead of one spatula; his way of scarifying the edges, and applying the sutures, is entirely the same; and notwithstanding Dr. Wutzer's taking silk instead of silver-sutures, his *results* are entirely the same as those claimed by Dr. Sims, *i. e.*, he perfects a cure in the great majority of cases. Fig. 6, of Dr. Sims' pamphlet, represents the sketch of a fistula, very like one which Dr. Wutzer operated upon successfully, in the presence of the writer, by antero-posterior obliteration of the vagina. But it is not Wutzer alone; Kiwisch, Simon, Langenbeck, Baker Brown, and many others, are equally successful; and if we must admit, from our own experience, that silver-wire is less injurious to the living tissues than silk-thread, we are free to say, on the other hand, that the silk-suture does the same service with regard to ultimate results.

The case reported by Dr. KEILLER was a fistula of very considerable extent (half a crown in circumference), so that several gentlemen, among whom Dr. Spencer Wells, thought it one of the most desperate cases for operation. Therefore, no operation was attempt-

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\* Dr. Mettauer applied leaden-wire for the same purpose in 1847. Dr. Gossett, of London, cured a case of vesico-vaginal fistula, by gold-wire in 1834.

ed, and in the course of years the cervix uteri worked itself through the opening in the bladder, in consequence of which the womb was retroverted and incarcerated,—a condition not detected, while on examination the vagina was supposed to be occluded, as no os. or cervix uteri could be detected. On August 4th, Dr. Bozeman, of Montgomery, Alabama, U. S., undertook the difficult task, and operated in presence of Drs. SIMPSON, Weir, etc. He commenced by enlarging the opening on either side, by carefully dividing its extremities in a lateral direction by means of an angular-bladed knife. By these lateral incisions the cervix uteri became disengaged from the bladder, so as to allow its being more readily restored to its normal position in the vagina. By means of a small hook the right angle of the anterior edge of the fistula was raised, and the mucous membrane dissected off transversely towards the left angle. The anterior lip of the cervix uteri was then pared far in upon the vesical side, so as when the sutures were introduced and adjusted, the tendency to the previously existing uterine displacement might be overcome. By means of an ingenious porte-aiguille, seven silk sutures were passed through the now denuded lips of the fistula, to the end of each silk thread a silver suture was attached, and the former then drawn through, so as to bring the latter into their position. After this Dr. B. cut out a leaden button, shaped and perforated it on the spot, and immediately applied it over the sutures, fixing the former to the latter by means of seven small leaden bars. In manufacturing the button, Dr. B. took care to make a deep notch in its posterior edge, for the purpose of better accommodating and preventing injurious pressure upon the denuded anterior lip of the now replaced cervix uteri. A catheter was now introduced through the urethra, to be taken out every twelve hours, and the external parts to be syringed with warm water, and again introduced. After the operation symptoms of peritonitis set in, and the patient died on the sixth day after the operation. The cause of this fatal result was found to be a cellulitis starting from a sloughy condition of a small portion of the mucous coat of the bladder, at which point cellular inflammation had kindled up, extending subsequently into the surrounding tissues. The union of the fistular edges was found to be perfect, and the position of the uterus all that could be desired.

Dr. BRICKELL'S cases of vesico-vaginal fistula were successfully treated after Bozeman's method. For diminishing the phosphatic deposits in and around the catheter, the author administered benzoic acid internally and by injection into the bladder. As to the application of the sutures, Dr. B. passes the needle through the mucous membrane of the bladder, and he has observed not the least irritation from this procedure.

Dr. ESMARCH reports five cases of vesico-vaginal fistula successfully treated by silk suture. He proposes to detach the anterior wall of the bladder from the posterior surface of the pubic bones, by the vestibular section, in cases of firm adherence of the fistula with the ossa pubis.

A case is reported in the *Med. Tim. and Gaz.*, where two small fistulæ existed, communicating with the bladder, a little beyond the



last part of the urethra. Both were successfully operated upon by Dr. Foster.

Dr. SIMON read his paper on vesico-vaginal fistula before the meeting of the Rhenish physicians at Darmstadt, and in order to prove more satisfactorily the results of his method, he had invited all the women operated upon within three and a half years, and most of the number presented themselves to the Society, in order to be examined by the members present.

Of nineteen fistulæ, ten were healed completely; five incompletely, *i. e.*, they had to undergo a course of caustic treatment for small openings of the size of a pin's head, left open after the operation; only one fistula was sent back uncured; two women died after the operation; a third woman died after a preliminary operation. Of the perfectly cured cases, six were treated by the wet suture in eight operations; two by the wet suture, and after-treatment with caustic; two originally very small fistulæ were cured by the application of caustic alone. These different fistulæ were seated in very different locations.

One was a case of fistula vesico-uterina, *i. e.*, the cavity of the uterine neck was connected with the bladder without touching the vagina. The incontinence of urine was treated by antero-posterior obliteration of the os uteri. The woman is at present quite at her ease, while the menstrual blood is discharged through the urethra every four weeks.

Another woman was affected with a so-called *deep vesico-uterine-vaginal fistula*, *i. e.*, the anterior lip of the uterus, and a portion of the bladder and vagina, were destroyed. The fistula was cured by uniting the posterior lip with the wall of the bladder. In this case the menses also flow through the bladder.

A third woman had a very large fistula, which extended from the neck of the bladder up to the os uteri. In this case the loss of substance was covered by the anterior lip of the uterus. This woman was entirely cured, and afterwards gave birth to a living child.

Those fistulæ cured by cauterization alone were of a very small size.

Of the *almost entirely* healed fistulæ, three were so large that the loss of substance involved the entire base of the bladder up to its urethral portion, so that the only means left for operation was the *antero-posterior obliteration of the vagina*. All of these women were greatly benefited by this operation, *i. e.*, they only lost a few drops of urine when exercising too much.

The only case *not cured* was that of a woman with a fistula of enormous size, where also the sphincter vesicæ was destroyed. As the union of the fistulous edges could not be effected after several operations, episiorrhaphia was resorted to, but a small opening always remained, and could not be healed up.

Two of the women who *died* after the operation were seized with pyæmia, while one perished seventeen days after the operation from purulent inflammation of the cellular tissue surrounding the bladder, uterus, and rectum, with consecutive perforation into the peritoneal cavity.

The conditions on which the successful operations for vesico-vaginal fistulæ are based are two—1. The edges of the wound have to be approximated in such a manner that they offer a broad and healthy surface for subsequent union. 2. The edges must be united so that they cover each other entirely, and suffer no undue pressure from the suture. As simple as these principles appear to be at first sight, they offer very often much difficulty in execution. Some of these difficulties have lately been diminished by the manœuvre of pulling down the uterus, by the more complete artificial protrusion of the fistula, and by the application of specula better adapted to the purpose.

In order to obtain a sufficiently broad rear surface, the fistula must be cut in the shape of a funnel, the point of which is turned inwardly, while its long diameter runs in the lateral diameter of the vagina in the greatest number of cases. In cutting out this funnel, Dr. Simon pushes a pointed bistoury through the mucous membrane of the bladder in a diagonal direction towards the vaginal wall, and enlarges the opening around the fistula with the bistoury. He thinks that this method (wounding the wall of the bladder) does more towards healing, than Wutzer's method, who cuts only the vaginal wall.

For the suture, Dr. Simon applies exclusively a silk thread, because the other sutures applied, such as pins, are more difficult to use, and often impracticable when the fistula is situated laterally.

Dr. Jobert's "*operation plastique par glissement*," by which the lateral tension of the wound is intended to be overcome, is no longer practiced by Dr. Simon. He attains the same purpose by a few sutures, piercing the vagina at points a considerable distance from the wound, while the other sutures, intended for the healing of the wound, are placed close to the edges.

Fistulæ of so great a size, that a direct union of their edges cannot any more be thought of, must be treated by *antero-posterior obliteration of the vagina*. The same operation is to be performed when they are situated in such a location that a direct union is dangerous and giving no chances of success, viz.: those in the roof of the vagina, where at once the uterus is immovable.

In performing this operation, all that is left from the lower portion of the vesico-vaginal wall, is united with the posterior wall of the vagina, thus forming a sac surrounded by the upper portion of the vagina, and the anterior and lateral sections of the bladder.

The antero-posterior obliteration of the vagina has many advantages over the other methods (episiorrhaphia and transplantation), hitherto applied in the same classes of cases; 1. It offers more chances for healing; 2. It is connected with no danger, as only superficial layers of the membranes have to be removed; 3. It fulfills perfectly what is required, by arresting the incontinentia urinæ; 4. It has no distressing influence upon the health or comfort of the patient afterwards.

Dr. Simon has performed this operation six times, and the result was better than he expected, viz., only exceedingly small fistulæ (of the size of a pin's head) were left in some cases, and in all the urine

perfectly retained, except when the patients indulged in too hard work.

Five very small fistulæ were cured by the application of lunar caustic, three of which were left after the operation. In order to have the desired effect of the caustic, the stick must enter into the fistula itself, and touch its deeper portions. These cauterizations have to be repeated only every second, third, or fourth week. If applied more often, the good effect is destroyed.

In a letter to the editor of the *Medical Times and Gazette*, Dr. SIMPSON of Edinburgh, remarks that he has lately operated successfully upon several cases of fistula vesico-vaginalis, by using iron instead of silver sutures, and substituting iron-thread splints instead of Mr. Bozeman's lead-button. The button-suture is intended to prevent the lips of the wound being moved by the constant muscular contractions in the vesical walls. Dr. Bozeman's plan effectually prevents the disturbing effect of such movements lengthwise, or in the longitudinal direction of the wound. But it has no power to prevent the evil effects of such movements, if they occur crosswise, or transversely to the direction of the wound. The slender oval, iron-thread splint, which Dr. Simpson has employed in three cases, overcomes, as he thinks, this difficulty, as it so far consolidates the lips of the wound, as to prevent them being moved, either in a longitudinal or tranverse direction. It is made by twisting ten or twenty wires of the size already indicated into an oval circle or ring, capable of including the lips of the fistula-wound, and a few lines of the vesico-vaginal septum, on either side, within its concavity. By a common borer, two, three, four or more small openings can be made among the wires on each side, so as to correspond to the number of sutures used. After the edges of the wound are brought together by the adjuster of Dr. Bozeman, the splint is fixed by passing first the iron-thread to its place; accurately fitting and adapting it there to the parts by the finger, and ultimately fixing the sutures across it, tying or twisting them over the lower bar of this apparatus. When duly adjusted and fastened, it appears to compress and consolidate the lips in a way which the plans previously adopted have not so completely effected. Besides it is easily made, easily applied, and easily removed. The wire used for this and as a suture-thread, is the common blue iron-wire. It is stronger, cheaper, and altogether more easily worked with than silver-wire.

For relieving the excoriations produced by the urine flowing constantly over the external genitals and thighs, in cases of vesico-vaginal fistula, Dr. SAVAGE recommends the following applications: One part of collodium and two of castor oil are mixed together and brushed over the excoriated surface of the labia perineum, thighs, etc. The mixture forms a soft, smooth coat, which resists for many hours the influence of the urine.

Dr. MUMM in his preliminary remarks on obliteration of the vagina, gives a historical sketch of the operations performed (by Vidal, Velpeau, Lénor, Bérard, Maisonneuve, Simon, Roser, Breslau, Wernher, Wutzer, Sims), and expresses his opinion that the operation ought to be applied only to those cases, where the other usual meth-

ods are impracticable. After considering the effects of the contraction following cauterization of wounds, and comparing them with the results of some of the operations performed, the author proposes to leave the final closure of the wound entirely to nature, thus rendering unnecessary the application of sutures, provided the mucous membrane of the vagina has been pared off to a sufficient extent. Not in one of the operations alluded to, union per primam was observed, the obliteration having been always effected secondarily, after the sutures had been removed. But in order to promote this contraction it is necessary to make the wound sufficiently large to obtain a circular instead of a longitudinal contraction. The breadth of the surface pared off, must exceed one inch in diameter. In this way the operation is considerably simplified; no particular after-treatment is required, and this wound will be closed up, even without a catheter, as readily as that performed in the perineal operation for stone.

Dr. SPENCER WELLS has modified Dr. Arnott's instrument for compressing the prostate by dilating the prostatic portion of the urethra, so as to make it serviceable for the dilatation of the female urethra. It consists of a female catheter, a piece of india-rubber tubing fitting closely over the catheter, an elastic tube furnished with a stop-cock, and syringe. On filling the syringe with water, fixing it to the end of the elastic tube, and injecting the water from the syringe into the catheter, the water is forced through small openings near the end of the catheter, and distends the india-rubber tubing which covers it. When the syringe is emptied, the stop-cock can be turned, and the syringe refilled. The india-rubber dilates at first in a globular form, afterwards in a more oblong direction, especially if any lateral pressure be made on it. In this way the urethra may be very gradually dilated until its diameter exceeds an inch. The instrument is introduced as an ordinary catheter, and so held that the centre of the distending portion is kept just within the meatus. In the only case where M. Wells applied the instrument the effect was admirable, the pain was by no means excessive, and the dilatation did not occupy more than ten minutes.

Dr. FARRE had occasion to examine three membranes discharged during menstruation, which in their triangular form were taken at first for mucous membrane of the womb. However, they were larger than the non-pregnant uterus, and no openings could be found on those places where the Fallopian tubes enter, nor the sieve-like appearance. Under the microscope it appeared to be one continuous layer of flat nucleated epithelial cells, while all the characteristic elements of the uterine mucosa were wanting. A second membrane of this kind exhibited the same characteristics, and had an undulated surface, answering the folds of the vagina. Its shape was cylindrical with an impression at its upper end from the cervix uteri. The third membrane came away from a married lady during menstruation. Before it dislodged, the body experienced a pressing sensation round the anus, difficulties in the sitting position, and itching in the vagina. All these symptoms disappeared with the discharge of this membrane. Its character was perfectly analogous to the above

mentioned, and the depression at its upper termination was a perfect cast of the cervix and labia orificii uteri. From the shape of this membrane it appears that the vagina is a short, flat canal, the anterior and posterior walls of which do touch each other, its length being 3" ; the width 1" or 1 $\frac{1}{4}$ ".

Dr. SCHMIDT communicated an interesting case of traumatic occlusion of the vagina, before the Cork County Medical Society. The vagina had been totally occluded in consequence of a protracted labor. Dr. Schmidt made an incision with a concave tenotome and enlarged the opening by a compressed sponge. It was afterwards successfully kept open by a catheter.

Dr. SCHULZE's article on perineal rupture contains some very interesting and original views on the subject. During the passage of some of the larger fetal parts, the os externum is necessarily violently expanded. In order to have this dilatation proceed as safely as possible, three conditions must be observed :

1. The extension, which the os externum has to undergo, must be as little as possible, *i. e.*, the head must present to the os the smallest possible circumference.
2. The extension must be effected in such a way, that the elasticity of the surrounding parts is brought to bear in its fullest extent.
3. The tension of edges must be distributed equally on the periphery of the os, in order to avoid over-extension of some of its sections (perineum).

With regard to the first named condition, it must be remembered that a large size of the head with a small os, and the presentation of the head in its small diagonal diameter, with fronting large fontanelles, are circumstances favoring a perineal rupture. The head has the same disastrous influence, if it is prevented from passing with its small diagonal diameter, in or near a horizontal direction (*sutura sagitalis* in the lateral diameter of the outlet). In this latter instance the rupture can be prevented by changing the position of the head with the forceps. In other instances the head is prevented from passing with its smallest diameter by a too rigid perineum, which prohibits the free development of the occiput underneath the pubic arch, in consequence of which, it will present with its large lateral diameter. In this instance the occiput must be brought forward under the pubic arch, by a pressure with the fingers towards the perineum. An early pressure of the perineum by the supporting hand must do more harm than good, as it might prevent a self-regulation of this malposition. This abnormal direction of the head is often caused by a too high symphysis pubis. At times the *ligamentum arcuatum inferius* (*ligamentum triangulare urethrae* of the male), has the same effect, as a too large symphysis pubis. This hindrance is often successfully overcome by a powerful pressure with the hand against the perineum.

The forceps, instead of favoring a rupture of the perineum, is rather a remedy by which we may prevent it, in pressing the occiput strongly towards the arcus pubis. To press the left hand against the perineum during the extraction of the head with the forceps, is of no use at all. The second condition will be satisfactorily complied with, if we let the head have a sufficient length of time to pass the

os. This can be effected by direct pressure upon the advancing head, by two or more fingers. With regard to the third condition, it must be said, that under ordinary circumstances, the lower point of the axis of the fœtus, when passing towards the outlet, rests upon the anus, from which part it is directed upwards, so as to exert an equal pressure upon the circumference of the outlet. If the os sacrum is very little curved, if the parts, forming the pelvic basis, are too flaccid and pliable, if the pelvis is very little inclined, if the pubic arch is too narrow, the axis of the fœtus is more or less retained in its original direction, thus perfecting an undue pressure upon the perineum. This evil is often successfully remedied by applying the hand to the perineum, and pressing the head towards the symphysis pubis. These latter considerations have an equally strong bearing with regard to the passing of the shoulders. The upper shoulder must first pass, before the lower one leaves the perineum, to which we have to apply one hand in order to elevate the second shoulder, thus preventing a laceration. From these considerations, it appears that a pressure of the perineum with the hand, is only justifiable in case of a too broad and rigid ligamentum triangulare, or, under the circumstances, as mentioned under No. 3. But in many instances, these and other manipulations are insufficient to save the perineum; and we must have recourse to incisions, especially in those cases where the head is too large, or the vulva too small and rigid. One or two incisions of five or six lines in length have to be made in the posterior circumference of the vulva, in a direction towards the tuber ischi. In very rare instances, where two incisions are not sufficient, a third or fourth incision has to be added. At times the ligamentum triangulare is so much elevated, that the head is prevented from approaching the pubic arch, and in this case, the ligament must be cut into in a lateral direction, and about one inch distant from the urethra, in order to avoid the large veins in its neighborhood. When these incisions are neglected, the upper circumference of the vagina is inclined to rupture, thus giving issue to violent and uncontrollable bleedings, when the rupture happens to be near the urethra, an accident observed in four instances by Dr. Schultze. The most justifiable time for the lower incisions is, when the frenulum begins to give away, while those touching the ligamentum triangulare must be made, as soon as the impediment begins to show its influence upon the progression of the head.

But when the perineum has been ruptured, the question arises, At what time have we to resort to a surgical operation for its restoration? This question seems to be settled now-a-days, viz., the operation must be performed immediately after the accident. Dr. Schultze openly confesses, that perineal ruptures, injuring the middle or posterior third of the perineum, had not been of unfrequent occurrence during his obstetrical career. Smaller lacerations heal on their own account, while those touching the middle, or even a more considerable portion of the perineum, demand an immediate operation. With regard to the latter point, we cannot agree with the author, as we have seen repeatedly, that perineal ruptures heal perfectly, even when they involve more than two-thirds of the perineum. E. N.—In

performing the operation, it is generally necessary to cut away those portions of the edges which run very uneven, and have suffered from pressure. From a comparative application of serres-fires and thread-suture, Dr. Schultze came to the conclusion, that the latter gave a more perfect union. In thirty cases operated upon, twenty-eight united her *primam intentionem*. With regard to after-treatment, Dr. Schultze thinks it unnecessary to keep the patient lying on her side, as the lochial secretions, flowing over a well united wound, will not prevent a safe union. It is sufficient to make an injection every few hours into the vagina, and apply cold water dressings to the perineum. Equally unnecessary is the application of the catheter, or the use of opium, for retarding a motion of the bowels, provided the rectum itself is not injured.

Dr. MATTEI presents the following views as to the means of preventing laceration of the perineum. It is especially necessary, that the head passes the vulva in a favorable direction. This can only happen when it passes with the necessary *dégré* of flexion. Whilst the occiput passes under the pubic arch, the face has not yet quitted the pelvic outlet; as soon as the upper part of the neck comes under the pubic arch the extension of the head (or the separation of the chin from the breast) begins. If the distension of the perineum begins too early, the head must pass the vulva with unfavorable diameters, viz., with the great oblique, or great or straight diagonal diameters. Such a passage easily causes laceration. Hence, it is the task of the physician to prevent a premature distension by the head. This he effects by placing two fingers between the labia, or in some cases between the pubic arch and occiput, so as to bring the head downwards and outwards, at the same time laying the other hand on the hinder part of the perineum, upon which the face is lying. This manœuvre is to be executed during the pains, which will thus protrude the head forwards in the requisite position. A very simple means of expediting the birth of the head consists in compressing firmly the distended perineum with the whole hand. This resembles the squeezing-out of the kernel from the cherry. On the passage of the shoulders, care must also be taken lest the two shoulders pass together.

Dr. MORLAND's paper on Laceration of the Perineum is one of unusual interest. He insists upon early operation and the use of quilled sutures with interrupted sutures—the latter for the union of the deeper portions of the wound. Dr. Morland alludes to the unusually long and broad and rigid perineum as a frequent cause of laceration.—We would suggest that this conformation of the perineum is the very thing where early incisions may prevent the rupture.

The object of PRIESTLEY's communication on a peculiar form of laceration of the perineum, is to call attention to the occasional occurrence of a horizontal or transverse form of laceration, not indeed extending necessarily to the cutaneous surface of the perineum, but implicating the upper or mucous layer, which is situated internally, and yet constitutes an important element of the perineum. In first labors, as the head descends on and lengthens the perineum,

two well-defined ridges are found on its anterior free border. These ridges correspond respectively—the upper one to the usual attachment of the hymen or *carunculæ myrtiformes*, the lower to the line of union between the mucous membrane and the skin. Thus, at the orifice of the vagina, posteriorly, a circular resisting band presents itself, which, in exceptional cases, and especially if reinforced by an incompletely ruptured hymen, offers considerable opposition to the completion of labor, and here the mucous membrane is sometimes lacerated in a horizontal direction along the resisting line, implicating the orifice of the vagina as if an incision had been made in a circular direction, severing the inferior extremity of the vagina from its usual junction with the perineum. One case is reported.

Dr. Breslau's patient suffered from constant *stillicidium urinæ* since her last confinement, complained of a very distressing irritation around the pudenda, and a feeling of bearing down in the lower pelvis. When examined, the circumference of the external genitals and the inner surface of the thighs were found excoriated, very painful to the touch, and drenched with urine. Both *nymphæ* were considerably thickened and several inches long, while the orifice of the urethra was enlarged, so as to admit the introduction of the fifth finger. A vaginal examination discovered nothing but slight *leucorrhœa*. Therefore, Dr. Breslau thought that the enormous hypertrophy of the *nymphæ* had a paralyzing influence upon the urethra in dragging the latter constantly downwards. This was confirmed by the report of the patient, who felt the greatest distress when she was in an upright position. Under this impression, Dr. B. removed one of the *nymphæ* by the *écraseur*, and the other some time afterwards by *galvanocaustic*. The patient left the hospital entirely relieved of all her ailings.

After a short analysis of the literature, and a minute anatomical description of the vagina, which presents nothing new, Dr. LADREIT enters upon the consideration of those cysts which are imbedded in the deeper portions of the vagina. They are always situated one inch at least beyond the hymen, and are considered by most authors to originate from the vaginal follicles, while the author believes the cellular tissue of the vagina to be very often the seat of their development. In other instances they may commence between the muscular layers of the rectum and vagina, or between the bladder and vagina. By microscopical examination he was enabled to prove the absence of an epithelial layer in those more remote vaginal cysts, which is an essential portion of the glands and of those cysts, which are situated in the neighborhood of the vaginal orifice. They are composed of cellular, fibro-cellular, fibro-plastic, and vascular tissue. They result from an inflammation, the deposits of which are not transformed into pus, but into a *bursa mucosa*. The most favored place of development is the anterior wall of the vagina, and in by far the greatest number of cases parturition, or sexual intercourse, had preceded their origin. As long as the cysts are small, and situated far above the entrance of the vagina, they scarcely give any trouble, and their presence is not noticed by the patients. Some have been found as large as a hen's egg; they



are mostly of an ovoid shape, with smooth surface; those originating from one of the vaginal glands have a pedicle, and are movable, and present themselves at times near the orifice of the vulva. Unless they are of considerable size, they do not effect any inconvenience whatever, while at times they give rise to a distressing sensation of dragging, to fluor albus, or dysuria; they even, in some instances, have presented an obstacle to parturition. The liquid contained in these cysts is of a yellow or brown color, and generally contains granular globules, which are composed of simple granulations. The outer layer of these cysts consists of the mucous membrane of the vagina, which is very much distended and discolored. The inner layer is composed of cellular and elastic tissue, with a vascular stratum, intermixed with a few muscular elements. These tumors have been mistaken for prolapsus uteri, hernia vesicæ, or recti, tumors of the ovaries, etc. Still, by a minute examination, it is not difficult to come to a right diagnosis. The treatment of these cysts is the same as that applied in hydrocele, be it by excision or injection of a stimulating liquid. The article is concluded with the history of five cases.

## VII. PHYSIOLOGY AND PATHOLOGY OF THE BREASTS.

1. *Traité des maladies du sein et de la region mammaire.* Par le Dr. Velpeau. 2<sup>me</sup> edit. In 8. Avec figures dans le texte et planches en taille douce. Paris. 1858.
- *Treatise on the Diseases of the Breast and the Mammary Region.* By Velpau, M.D. 2d edition, etc.
2. Albert, A., *de diagnosi morborum mammæ.* Thesis. Gryphiswaldæ. 8vo. pp. 31.
- Albert, A., *Diagnosis of the Diseases of the Breast,* etc. Thesis.
3. Berkett, T., *on Tumors of the Breast.*—Med. Tim. and Gaz. Jan 16.
4. Fischer, C., *Unusually Large Abscess of the Breast.*—Zeitschr. f. Chir. u. Geburtsh. XI. p. 27.
5. Harpeck, K., *Remarks on the Pathological Anatomy of Cysto-Sarcoma Mammæ, especially with Regard to its Relation with the Normal Structure of the Mammary Gland.*—Reichert's Studien. p. 110.
6. Lee, R., *Pregnancy in a Woman, whose Mammæ had been Extirpated some years ago.*—Med. Tim. and Gaz. July.
7. Breunig, G., *Collodium against Mastitis.*—Med.—Chir. Mon.—Hefte. Sept.
8. Newman, W.; Trend, H. G.; Miller, and Blythman, *Belladonna as a Means of Arresting the Secretion of Milk.*—Brit. Med. Jour. Feb., etc.—Brit. Jour. July.—New York Jour. Nov.
9. Roussel, *Iodide of Potassium for Diminishing the Secretion of Milk.*—Gaz. des Hôp. 75.

10. Skinner, Th., *Arsenic as an Antagalacticum*.—Brit. Med. Jour. Sept. 11.
11. Pratt, N. A., *Vicarious Action of the Kidneys in the Secretion of Milk*—Savannah Jour. I. 4. Nov.
12. Lewald, G., *on the Passage of Drugs into the Milk*. Thesis.—Prager Vihrscft. XV. 4.

DR. VELPEAU has published a new edition of his work on Diseases of the Breast; eight hundred new observations are here added to his former ones. These are a few of his general conclusions: about one-fourth of the tumors of the breast are benign; though the time is not far distant, when they were all regarded as malignant. The left breast is rather more frequently than the right breast the seat of cancer, and for this there is no assignable cause. It is not correct to say that married women are more subject to the disease than others. It is also an error to suppose that women who do not nurse their children, are more exposed to diseases of the breast than those who do; on the contrary, these affections are three times more frequent in those who nurse. The constitution, the temperament, the character, the social position, the hygienic condition, the mode of life, the country, exercise no influence over the production of cancer. The nature of cancer, notwithstanding all the efforts of the microscopists, is still absolutely unknown.

DR. HARPECK, in his very ingenious article on cystosarcoma, before entering upon the subject itself, presents a minute description of the microscopical appearances of the normal mammary gland, its nipple, areola, and proper glandular tissue, being taken for the representatives of a modified integumentum commune. The existence of organic muscular fibres in the papilla, which has been denied by several authors, can be easily demonstrated, by treating horizontal cuts with nitric acid. The lactiferous ducts consist of an epithelial layer and a stroma, the structure of which enters into that of the gland itself; the latter consists of vessels, and of a large number of longitudinal elastic fibres. A cysto-sarcomatous tumor of the breast consists of larger or smaller cavities, imbedded in a bright, fibrous stroma, which is accompanied by large vessels. From the inner surface of the cavities, covered with papillary excrescences, a layer of epithelial cells may be easily detached. These cells are replete with fat-globules, arranged in a line near the circumference. These cavities could be injected with a red substance from the openings of the excretory ducts in the papilla. There are two distinct forms of the tumor in question, one of a more solid structure, one where the cystic structure prevails, which, however, are only different stages of development of the same disease. Among the solid forms, those of a papillary habitus are the most frequently met with. The papillæ again are ramified, branching out in different directions. The stroma of these ramifications is arranged in two layers; an inner, darker, striated, and an outer granulated deposit of a lighter yellowish hue. The darker, or immediate stroma of the papilla, contains a large number of elliptic, spindle-shaped bodies, arranged in a parallel direction with the longitudinal axis of every papilla; the

outer granulated tissue is formed by a hyaline blastema, with numerous short, oval nuclei. From this it appears that the papillæ are formed by an embryonal cellular tissue, which, towards the central part, is combined with a hyaline blastema. Besides this papillary species, an areolar one is often observed, the aveoli of which, lined by the fibrous, and filled with the granular tissue, pursue a longitudinal and ramified course. Another kind of these hollow forms, is characterized by the want of ramifications and the appearance of a proper lining membrane. From a comparison of the microscopical appearance of cysto-sarcomatous disease, with that of the tissue of the normal gland, it appears that it is nothing but a metamorphosis of the original constituents of the female mammary gland; the ductus excretorii and large milk-ducts being hypertrophied, while papillary excrescences are formed, which increase by sprouting out in different directions, a process often observed in the cutis and the mucous membranes. This excessive growth proceeds from the larger channels towards the smaller ones, thus leading to atrophy of the original structures of the original cavities in the gland.

Dr. LEE reports the case of a woman who had given birth to five children after her breasts had been removed for scirrhus. In every childbed she experienced a strong congestion towards the axillary glands two days after delivery.

Successful applications of extract of belladonna, for arresting the secretion of milk, are reported by Drs. NEWMANN, TREND, MILLER, and BLYTHMAN. The latter gentleman applied it in two cases to one breast, while the mothers continued to nurse their babies with the other mamma. The best preparation for this purpose is a mixture of equal parts of extractum belladonna and glycerine.

Dr. BREUNING has successfully treated two cases of mastitis by brushing over the diseased part and neighborhood, collodium every three hours.

Dr. ROUSSEL recommends the internal use of hydro-iodide of potash for arresting excessive secretion of milk. A woman who suffered from chapped nipples, engorgement of the mammae, combined with some fever, was ordered to take the iodine, and by the next day the pain and fever had disappeared; its employment for three days rendered the cure of a tumefaction, that threatened abscess, complete. Dr. Roussel has since then tried it in twenty cases, and always with success. The flow of milk returns always three days after the suspension of the iodide. Its action is more decided in the dose of from six to eight grains per diem, than if it is given in larger quantities.

Dr. PRATT's case of milky secretion from the kidneys is one of those which must be received and judged with greatest caution. Although the specimen examined was drawn with the catheter, we believe that some deception must have occurred. We never can believe that milk-globules pass through the vessels of the kidneys into the bladder, or even from the breast into the blood. Up to the present time no milk-globules have been found in the blood, and never will be. There is one great defect in the analysis of Dr. Pratt, viz., "No urea was found and no uric acid." Now, the woman in question had altogether three attacks of this milky secretion, every one of them

lasting from five to six months. What has become of the urea, and is it possible that a woman can live five months without passing any urea or uric acid?

The following experiments were performed by Dr. LEWALD: The tincture of *chlorid of iron* was given to a goat, in the dose of 20 drops for a length of time, whereupon the analysis of its milk showed clearly the presence of iron. After administering 0.915 grmm. of the *nitrate of bismuth*, this drug could be traced in the milk 36 hours afterwards; three days after the last dose it could no more be detected. *Tincture of iodine*, given in the dose of 15 grmm., appeared in the milk 96 hours afterwards, and disappeared 72 hours afterwards. Two and a half grmm. of *hydro-iodide of potash* were now administered, and iodine traced in the milk 7 hours afterwards, and only on the twelfth day it disappeared. At this time  $2\frac{1}{2}$  grmm. of the tincture of iodine were given, and 5 hours later the milk contained again some iodine. During these latter experiments more milk was secreted than before. The iodine was never detected in the serum, but always in the casein. *Arsenic* (45 to 50 drops of Fowler's solution, repeated twice) was found in the milk after 17 hours, and disappeared after 60 hours. *Sugar of lead* could be traced after 18 hours. *Oxyd of zinc*, in the dose of 1 grmm., appeared in 4 to 18 hours, but disappeared in 60 hours. *Tartarus stibiatus* was traced very soon after its administration, and disappeared after 80 hours, while the stib. sulfur. aurant. remained 5 days after the last dose. After repeated doses of 2 gr. of *calomel*, mercury was found in the milk. *Alcohol* could not be detected. The milk of a goat, which took *opium* and *morphine* for three weeks, had no effect upon rabbits, which partook of it.

## VIII.—THE PELVIS.

1. Lambl, of Prague, *the Nature and Origin of Spondylolistesis*.—Scanzoni's Beitr. Z. Geb. Bd. 3.—New York Jour., Nov.
2. Breslau, *a Contribution to the Knowledge of Spondylolistesis*.—Scanzoni's Beitr. Z. Geb. Bd. 3.
3. Hohl, on *Kilian's Halisteertic Pelvis*.—Deutsche Klinik 24. (Critical analysis.)
4. Whitaker, of Lewistown, N. Y., on *Fracture of the Pelvis during Pregnancy*.
5. Mann, F., on *a Funnel-shaped Pelvis*. Thesis. Marburg gr. 8.

All the pelvis presenting the vertebral sliding, pointed out for the first time by Prof. Kilian (see the *New York Journal of Medicine* of May, 1857, p. 389), have been subjected to another thorough anatomical examination by Dr. LAMBL, in order to find out a law explanatory of the nature and rise of spondylolistesis, in comparing it with similar deformities in other sections of the spinal column.

1. The pelvis of Prague (described by Kiwisch, Seyfert, Kilian, Gurlt), is remarkable for the total absence of disease in the bony

system, thus leading to the supposition that the remote origin of the malformation has to be sought for in the original development of the pelvis. The cause of the deviation is founded on the presence of an intercalary vertebra, which is a rudimental piece of bone, incuneated from behind into the sacro-lumbar juncture.

2. The pelvis of Munich (described by Breslau) is in many points similar to that above mentioned, especially in regard to the anatomical disposition of the lumbo-sacral juncture. It presents a hydrorhachitic opening in the spinal canal, and a supernumerary vertebral body with consecutive lordosis and partial synostosis of the dislocated vertebra with the os sacrum. These supernumerary vertebræ may be found at different places in the spinal column, thus effecting deviation in many directions.

3. A large female pelvis in Vienna (described by Rokitansky and mentioned by Kilian). The cartilaginous disk of the lumbo-sacral juncture has disappeared entirely; the articular surfaces are uneven, very hard, and covered with warty excrescences. These osseous protuberances are owing to a new formation, and are the cause of the thorough ankylosis of both vertebræ; upon the anterior edge of the first sacral vertebra may be found osseous masses, supporting the upper vertebra, which are located symmetrically on both sides of the mesial line, thus preventing the vertebral column from sliding down any farther.

4. A small female pelvis in Vienna (described by Rokitansky, Spaeth). The most striking feature in this specimen is the compression of the first sacral vertebra and the reduction of its height anteriorly to 3"', so that the lower margin of the last lumbar vertebra is situated just opposite the upper margin of the second sacral vertebra. Besides this, the pelvis presents hydro-rhachitis sacro-lumbalis, with consecutive elongation of arch of the fifth lumbar vertebra, parallel to the vertical position of the articular surfaces of the proc. obliq. inf., dislocation of the same vertebra in front, lordosis lumbalis and pyæmic destruction of the symphysis pubis after metro-phlebitis puerperalis.

5. The pelvis of Paterborn (described by Kilian). It is of a very symmetrical form, presenting a clean lordosis of the lumbar portion of the vertebral column, without any lateral inflexion. The bones look very much like those in osteomalacic basins. No intercalary vertebra is present. The fifth lumbar vertebra is elongated in its sagittal diameter, forming a semicircle with upper convexity. The arch of the fifth lumbar vertebra is of a hydro-rhachitic construction, and this is, no doubt, the primary point which caused the dislocation of the vertebral body and the lumbar lordosis.

After a minute description of these five specimens, Dr. Lambl mentions—1. Dr. Robert's observation (*Monatsschrift für Geb.*, 1855, Bd. 5, Sept. 2, p. 81). 2. The pelvis of Brussels, a description of which was obtained by Prof. Gluge. It belonged to a rhachitic woman, 42 years old, who was pregnant with her third child, the second one having been delivered with the forceps. The last time, death occurred suddenly during labor, from rupture of the womb. In a post-mortem examination, all the pelvic symphyses were found

very movable, the bones of the pelvis were very thin, the lower lumbar vertebræ have an anterior flexion (lordosis), narrowing the entrance of the pelvis so much, that the fourth vertebra takes the place of the promontory. The upper part of the os sacrum is in an atrophic and spongy condition, no doubt resulting from a local caries, in consequence of which the sacral bone shrunk, thus permitting the vertebral column to slide forward. Therefore, this pelvis (mentioned by Kilian) cannot be counted among the spondylolistetic pelves. Among the pelves with vertebral sliding may be counted--*a*, a pelvis in Paris in the cabinet anatomique de la maison d'accouchement; *b*, a preparation in the amphithéâtre des hôpitaux, in Paris; *c*, a preparation in the anatomical museum of Bonn.

In opposition to these formations there is a deformity from spondylolistesis and caries, in consequence of which the vertebral bodies and their disks are destroyed, while at the same time an osteophyte begins to grow up, which tends in a great measure to repair in some degree the primary evil; a preparation of this kind may be seen at Montpellier; lastly, a curious destruction and deviation of the vertebral column is observed in some instances, viz., kyphosis of the lumbar vertebræ, with compensating lordosis of the pectoral vertebræ.

Dr. BRESLAU gives a description of a preparation taken from the Musée Dupuytren at Paris, which is intended to show that the pelvic deformity called spondylolisthesis (Kilian), may be possibly produced by a fracture of one of the vertebræ. The specimen examined belonged to a laborer who fell from a tree, first upon his feet and then upon the back. The immediate result of the fall was a paralysis of both lower extremities. Thirteen months later he died in consequence of pyæmia from a bed-sore. The twelfth dorsal vertebra was found fractured in a diagonal direction, presenting an upper fragment, which had been reabsorbed in the course of time, and a lower fragment of a triangular shape, the basis of which was directed and protruded towards the spinal canal. Upon this planum inclinatum the eleventh vertebra had glided down upon the first lumbar vertebra, thus effecting a considerable change in the axis of the spinal column. If this same fracture had occurred in the fifth lumbar vertebra, it would have occasioned the same pelvic deformity as described under the name of spondylolisthesis.

Dr. WHITAKER reports the case of a fracture of the pelvis during pregnancy. A lady, in the seventh month of gestation, fractured the body of the left os pubis, by a fall upon an open barrel. The fracture united in six weeks, but reöpened during labor at the full term, and united again.

## IX. GENERAL DISEASES OF WOMEN DURING PREGNANCY, LABOR, AND CHILDBED.

1. *De la fièvre puerpérale, de sa nature, et de son traitement. Communications à l'Académie Impériale de Médecine.* Par MM. Guérard, Depaul, Beau, Piorry, etc., etc. Paris: T. B. Baillière et Fils, 1858. In gr. 8. pp. 462.  
— *The Discussion on Puerperal Fever in the Paris Academy of Medicine, etc.* Paris: T. B. Baillière et Fils, 1858, etc.
2. *On Puerperal Fever.—Discussion in the New York Academy of Medicine.*—New York Jour. II. 3; III. 1; IV. 1, etc.
3. *La fièvre puerpérale et l'Académie Impériale de Médecine:* Par Dr. L. Fleury. In 8vo. Paris: Labé, 1858.  
— *On Puerperal Fever and the Paris Academy of Medicine.*—By L. Fleury, M.D., etc.
4. Stoltz, A., *The Puerperal Fever in the Paris Academy of Medicine.*—Gaz. de Strasb. 6.
5. *De la fièvre puerpérale devant l'Académie de Médecine de Paris et des principes du vitalisme hippocratique appliqués à la solution de cette question.* Par Dr. E. Auber.—In 8vo. de 110 pp. Paris, 1858, chez Germer-Baillière.  
— *The Puerperal Fever before the Paris Academy of Medicine and the Hippocratic Vitalism with Regard to this Disease.* By E. Auber, M.D. Paris, 1858, etc.
6. *De la fièvre puerpérale observée à l'Hospice de la Maternité.* Par Dr. S. Tarnier. Paris, 1858. In 8vo. de 208 pages.  
— *The Puerperal Fever, as it was Observed in the Maternité.* By S. Tarnier, M.D., etc.
7. Pidoux, *Remarks on Puerperal Fever.* L'Union, June 5, etc.
8. Behier, T., *on Puerperal Fever.* Letters addressed to Prof. Trouseau.—L'Union. 46, 49, etc., etc.
9. Murphy, W., *on Puerperal Fever.* Translated in French by Gentil, M.D. Paris, 1858. 8vo. pp. 32.
10. Helot, Ch., *on Puerperal Fever.* Thesis. Paris, 1858. 4to.
11. Wrotnowsky, J., *on Puerperal Fever.* Thesis. Paris, 1858. 4to.
12. Dor, H., *on Epidemic of Puerperal Fever at Prague.*—Gaz. Hebd. V. p. 146.
13. Surmay, *on Puerperal Fever.*—L'Union. XII. 99.
14. Bertillon, A., *on Puerperal Fever.*—L'Union. 85.
15. Cros, E., *on Puerperal Fever.*—Gaz. des Hôp. 63.
16. Dubois, P., *on Puerperal Fever.*—Gaz. Hebd. V. 18, 19.
17. Joux, A., *on Puerperal Fever.*—Ibid, 49, 57.
18. Pechalier, *on Puerperal Fever.*—Rev. Méd. March, 31.
19. Levy, G., *Relation de l'épidémie de fièvre puerpérale, observée aux cliniques d'accouchement de Strasbourg, pendant le 1. semestre de l'année scolaire 1856-57.* Thèse. Strasbourg, Christophe. 4. pp. 119.

- Levy, G., *Report on the Puerperal Fever, Observed at the Obstetric Clinic of Strasburg during 1856-57*, etc.
- 20. Macari, Fr., *on Puerperal Fever*.—Gaz. Sarda.
- 21. Brochin, *on Puerperal Fever*.—Gaz. des Hôp. 81, 84.
- 22. Legroux, *on Puerperal Fever*.—Bull. de Théor. LV. July.
- 23. Virchow, *on a Puerperal Fever Epidemic, Observed in the Charité of Berlin*. (Transactions of the Berlin Obstetric Society).—Monat-Schrift f. Geburtsk. June.—New York Jour. Sept.
- 24. Lehmann, L., *on Puerperal Fever*.—Jour de Brux. September and October.
- 25. *Qu'est ce que la fièvre puerpérale? Etudes sur les maladies des femmes en couche*. Par Dr. F. Gallard in 8vo. de 30 pag. Paris: Labé, 1858.
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- 26. O'Reilly, T., *Observations on the Identity of Erysipelas and Puerperal Fever*.—*Diffuse Inflammation consequent on Erysipelas*.—*Poisoning of the Blood after Parturition*.—Amer. Med. Gaz. IX. 12. Dec.
- 27. Noizet, R., *Prof. Simpson's Views on Contagion and Propagation of Puerperal Fever*.—Gaz. Hebd. V. 21.
- 28. Prosper de Pietra Santa, *on the Pathology of Puerperal Fever in the Florence School*.—L'Union. June, 24.
- 29. Tarnier and Vulpian, *on the Pathological Anatomy of Puerperal Fever*.—Gaz. Hebd. V. 17.
- 30. Barbran, *on Puerperal Metro-Peritonitis*.—Thesis. Paris, 1858.
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- 32. Koch, *on Puerperal Metastasis to the Thyreoid Gland*.—Würtemb. Corr.-Bl. No. 10.
- 33. *The Uræmic Convulsions of Pregnancy, Parturition, and Childbed*. By Dr. Carl Braun, Prof. of Midwifery, Vienna. Translated from the German, with Notes, by J. Matthews Duncan, F.R.C.P.E., Lecturer on Midwifery, etc. 12mo., pp. 182. New York, S. and W. Wood, 1858.
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- 35. Isham, R. N., of Chicago, Ill., *on Some of the Causes of Puerperal Convulsions*.—Chicago Jour. I. 10. Oct.
- 36. Litzmann, *New Contributions to the Doctrine of Uræmia during and after Pregnancy*.—Mon.-Schr. f. Geburtsk. June.—New York Jour. Sept.
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38. Pesch, *Case of Puerperal Eclampsia; Recovery*.—Mon. Schr. f. Geburtstk. XII. 3. Sept.
39. Wegscheider, *Case of Puerperal Eclampsia*.—Mon. Schr. f. Geburtstk. XII. 3. Sept.
40. Paget, *Case of Eclampsia*.—Gaz. des Hôp. 14.
41. Findlay, W. S., of Fazewell, Tenn., *on a Case of Puerperal Convulsions*.—Med. Report. March.
42. Boursier, *Eclampsia during the 8th month of Pregnancy; Delivery of two Children, United by the Sides*.—L'Union 74.
43. Croskery, H., *a Case of Puerperal Convulsions; Recovery*.—Med. Tim. and Gaz. June 19.
44. Carville, *Eclampsia during the 5th month of Pregnancy in a Chlorotic Primipara; Phlebotomy; Recovery*.—Gaz. des Hôp. August 17.
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52. Clemens, Th., *on Color-Blindness during Pregnancy; with Remarks*.—Arch. f. phys. Heilk. H. I.
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The most important event of the year was the discussion on puerperal fever in the Paris Academy of Medicine. The incident which called forth the discussion was of a trifling nature. Dr. Guérard lost a patient from puerperal fever, and this accident induced him to bring the subject of puerperal fever before the Academy. The first orator moved in very limited circles, which growing larger and larger gave origin to some of the most interesting and elaborate communications on record. The old guard took the lead in the battle, the fight was hot and spirited, agitating this learned body from centre to circumference. The great attraction of these academical discussions is due to the fact, that the members of this Society do not confine their study to their respective speciality, but are able

to speak on any subject of general interest, while, on the other hand, the great oratorical capacities with which almost every member of the French Academy is gifted, renders these speeches often more lengthy than desired. With regard to the final result of the discussion before us, we must say that science has been very little advanced by it, either from a theoretical or a practical point of view. The ideas as to the nature of the disease are just as unsettled as they were before, the only point upon which all agreed being the inefficiency of all the means hitherto proposed for treating the fever. The spirit exhibited in this centre of medical science spread all over the country, and roused the medical press, and called forth a more or less important treatise from the pen of almost every prominent member of the French profession.

The points offered by Dr. GUERARD, on which the discussion centered, are comprised under three heads—1. *Nature of the disease.* 2. *Mode of propagation.* 3. *Treatment.*

1. What part do the local inflammations have in the production of the fever? It is a fact that in many cases of puerperal fever no local lesions whatever are to be found after death (observations of Tonnelé, Voillemier, Bourdon); while in those cases of a "foudroyant" type there is no chance for the development of any local disease. The puerperal fever begins, in many instances, during confinement or soon afterwards, while the first symptoms of local inflammations always occur after a certain length of time, and these lesions vary in number and intensity following the peculiar nature of each epidemic. Therefore, these local inflammations are of a secondary order, and the consequence of a general cause. Is the cause of puerperal fever a purulent infection? The starting-point of purulent infection is the presence of pus in the veins and lymphatics. But, in many cases of puerperal fever, neither phlebitis nor lymphangitis are met with; and, on the other hand, a phlebitis may occur after confinement without producing puerperal fever, and several persons have injected pus into the veins, but failed to produce serious lesions. Therefore, puerperal fever is not due to purulent infection. The blood of every pregnant or parturient woman has a particular constitution, which is liable to generate specific *virus* in mother and child, under favorable circumstances, the symptoms of which are comprised under the name of puerperal fever. 2. *Mode of propagation.* There is a sporadic and an epidemic form under which the fever manifests itself. One way of propagation is by *infection*, because, as soon as an epidemic arises in an hospital, it has been found a good plan to shut it up; because women near their full term leaving the city when an epidemic rages, are benefited by this change; because women living for a length of time in an infected place are less liable to the disease than those who have recently entered it. Those facts reported by Dr. Depaul seem to establish the fact, that puerperal fever is transmissible by some kind of inoculation, or by the emanations coming from the patients. 3. *Treatment.* The chief remedies proposed for the cure of puerperal fever are—1. Antiphlogistics. 2. Narcotics. 3. Sulphate of quinine. 4. Ipecacuanha and mercurial ointment. At the beginning of the disease, local

antiphlogistics have been used successfully in some forms. The experiments with narcotics are not numerous enough to decide on their value. The opium seemed to have a good effect in some (sporadic) cases, in the dose of 20 or 25 centigrammes *pro die*. [This is a remarkably small dose.—E. N.] Drs. Beau and Lendet have used, and, as it seems, successfully, the sulphate of quinine. Ipecacuanha, used even now extensively, has been employed very successfully (Tonnelé) for some months, while after this time not one patient was benefited by emetics. Therefore, we have no specific remedy for puerperal fever, and different epidemics demand a different treatment.

After thus opening the discussion en feu de tirailleur, Dr. DEPAUL prepares to make the first charge. There is, no doubt, a peculiar disease that must be called puerperal fever, the seat of which is primitively in the blood. The disease is of an epidemic nature, it develops and behaves like most of other general diseases (typhus, cholera, etc.). It spreads most extensively in places crowded with women in childbed. Its outbreak is often preceded by other general diseases, such as diptheritis, purulent ophtalmia, erysipelas, etc. The disease called puerperal fever at times seizes upon persons who are not in the puerperal state. During violent epidemics it happens that pregnant women are taken, and die from it even before labor had commenced. In other instances the poison particular to this disease develops during labor or shortly afterwards, and death follows in a few hours. The foetus, while in the womb, may be affected by this poison, and at times some of the local alterations belonging to puerperal fever are found on its body. Sometimes all women who are delivered on the same day are stricken with the disease, while those who are confined the following day escape, though they are apparently under the same condition.

In almost every serious epidemic, some cases may be observed where no local lesion whatever is present. Dr. Depaul recollects one case of this kind, where the patient died 15 days after the beginning of the affection—some alterations in the blood were all that could be detected. In some epidemics the inflammatory affections of the peritoneum prevail, in others presence of pus in the lymphatics or pleuritis, meningitis, arthritis, etc., are prevalent.

The epidemic nature of the disease cannot be doubted; in some places it recurs every year. From the statistics of the Maternité de Paris, it appears that from 13,826 women confined during 5 years, 230 died from puerperal fever, *i. e.*, 1 out of 60. This is a small number compared to the average number of deaths of the other obstetric hospitals. Of 2,478 women who were delivered at the Maternité during 1856, 114 died from puerperal fever, *i. e.*, 1 out of 19, while in the city (12me. arrondissement) only 1 out of 322 died from puerperal fever in the same year, which proves that the mortality in the city was seventeen times less than in the Maternité and Clinique. Of all the obstetrical hospitals the Hôpital St. Louis shows the smallest number of deaths, even a smaller than the 12me. arrondissement. The explanation of this fact may be taken from the small number of confinements, or from the disposition of the single

wards, the obstetric department of this hospital being exposed to the west and east. It contains two large rooms, each of 8 beds, and 8 small rooms, with one single bed. The Hôpital Lareboisière, on the other hand, shows a large amount of fatal cases, though it has an excellent situation and a favorable disposition inside. From 31,667 women in the different hospitals, 644 died from puerperal fever, *i. e.*, 1 out of 48 women. Puerperal fever, like all general diseases, becomes contagious under certain conditions. Two cases are recorded where the nurses took the disease from women affected with puerperal fever. At times it happens that all women delivered in certain beds die one after another from puerperal fever, while those lying beneath them in other beds escape. Two observations are reported by Dr. Depaul, which seem to show that the disease might be transported from one to another place by healthy individuals after frequent intercourse with the sick. Another fact speaking in favor of the essentiality of the disease is the altered condition of the blood, as observed by Depaul, Virchow, Scanzoni, Lehmann.

With regard to diagnosis of puerperal fever, it may be said that it has no pathognomonic symptom of itself, and it is rather the coincidence of several symptoms which characterizes the disease. The fever generally appears 48 or 50 hours after delivery—seldom after the eighth day. One of the most constant symptoms is a chill at the beginning, which in most cases appears only once, or recurs after 24 or 36 hours, while sometimes it repeats at regular intervals, thus simulating intermittent fever. After this the pulse rises generally up to 140 or 160 strokes in a minute. The temperature of the skin is not increased in a very remarkable degree, while it is generally dry, the cold sweat making its appearance towards the fatal end. The trouble in the respiration is very significant, it being short, hasty, and intermixed with deep inspirations. The change of expression in the features has been observed by most physicians to be perceptible from the beginning of the disease. With this are combined certain intellectual troubles, the patients seem to awake from a slumber when accosted, and speak often with a peculiar trembling voice. In some of the most unfavorable cases, pains around the joints or in different muscles are observed, not unfrequently combined with a red hue of the skin, a disposition which unavoidably leads to a fatal result. Diarrhœa is seldom absent; abdominal pains, in some instances, very violent, in others wanting. To distinguish puerperal fever from purulent infection, the following points have to be considered: purulent infection is not known to set in before the 8th or 10th day; the chills are generally multiple, followed from the beginning by copious, viscous sweats; they repeat for several days in irregular intervals; the skin takes a dirty icteric appearance; the urine has a peculiar stench; there is a great tendency towards formation of abscess in the areolar tissue or the cavity of the joints; the disease lasts at least 8 or 10 days, often many weeks. Another affection akin to puerperal fever is the putrid infection, which depends from different circumstances; at times it arises from decomposed clots of blood retained in the vagina or uterus; in other instances retained pieces of the membranes or of the after-birth are the

cause of it, or it comes from the dead foetus itself. In putrid infection the chills are not severe, the tongue becomes dry and furred, the expression terrified; when this condition has lasted for awhile it changes to a hectic fever, with diarrhoea. The typhoid fever is easily distinguished from this affection. With regard to treatment, the right way has yet to be found; we have no remedy which can be relied upon. The very few cases (2 or 3 out of several hundreds) which Dr. Depaul saved, were treated with mercury, although in the greatest number of cases this remedy had not the least influence, and not one case of genuine puerperal fever has been benefited by quinine. With regard to *veratrum viride*, Dr. Depaul suggests that this remedy will not sustain for a length of time the sanitary influence attributed to it by Dr. Barker. As a prophylactic remedy, the sulphate of quinine has not rendered any better services to Dr. Depaul, though other authors seem to have derived considerable benefit from its administration. Up to the present time, no prophylactic measure has been found which was apt to influence the progress of the disease. The only way to diminish the number of victims would be, to abolish all lying-in hospitals, and have the women delivered at their own residences.

3. Dr. BEAU defended his medication (sulphate of quinine in high doses) against Dr. Depaul's aggressions, who asserted that the cases cured by Dr. Beau were not exactly what is called puerperal fever. Dr. Beau professes his belief that puerperal fever is a symptom connected with peritonitis, or some other inflammation. The existence of a so-called inflammatory diathesis cannot be doubted. This same diathesis exists in puerperal women, and this is the pathological influence to which must be attributed the production of the manifold local inflammations during childbed. The symptoms of this condition vary with the different local affections. Besides this diathesis, there exists an epidemic influence, till now perfectly unknown in its nature; both combined produce the different phlegmasies of the puerperal state, and of these the peritonitis is met with in 19 out of 20 fatal cases. Follows a description of the peritonitis, of which he distinguishes the supra-umbilical (general) and infra-umbilical form; the former *alone* is sufficient to produce, like general pneumonia, all the disastrous symptoms attributed to puerperal fever. The inflammation of the peritoneum depends from a previous general trouble of the system; this is for Dr. Beau the inflammatory disposition, while it is for Dr. Depaul and the rest the puerperal fever itself. To give further proof of his assertions, Dr. B. goes on to show that puerperal peritonitis bears the character of a phlegmatic, and not of an eruptive fever, as claimed by his adversaries. Moreover, there is never an eruption to be found as it is in typhoid and similar affections. The typhoid symptoms, as observed occasionally during puerperal fever, prove nothing against the theory, many other inflammatory diseases presenting the same typhoid symptoms. The blood has the same qualities as that in other inflammatory diseases, viz., increase of fibrine, just the reverse of what is found in eruptive fevers. With regard to puerperal fever without local lesions, it must be remembered—1. That these are exceptional cases. 2. That

the local disease is often unobserved, even after a rigid post-mortem examination (two cases reported). 3. It happens that women in childbed die from a fever which is by no means of a puerperal character, as might be seen at times in a lying-in hospital at a time when no puerperal epidemic is prevalent. 4. If the blood of many of these so-called puerperal fever patients was to be examined, many cases would turn out to belong to the eruptive class.

It is of greatest importance to begin with the *treatment* of puerperal peritonitis as soon as possible. First of all, an emetic has to be given, consisting of ipecac, 1 grm.; tartar emetic, 10 cgrm.; one-half of it to be taken every half hour. This is to remove the bilious habit often connected with the fever, and in order to better prepare the stomach for the reception of the quinine. The first dose of sulphate of quinine, 1 grm., is given after all nausea has passed over; 8 hours after this, 75 cgrm. are given, and the same quantity after 8 other hours. During the following days, this treatment is continued every eighth hour; as soon as the physiological effects of the quinine, drowsiness, deafness, etc., begin to show, all the symptoms of the disease lessen in a remarkable degree. This treatment must be continued for some time, and if the powder is rejected it must be given in another form, in pills, etc. Besides this, a flying vesicatoire may be placed upon the most painful spot of the abdomen. The curative effects of quinine are restricted to those cases where the peritonitis has not reached the superumbilical region; and it is also of no avail when a concretion of blood has formed in the heart. The non-success of this remedy in the hands of Dr. Depaul, is explained by the fact that his doses were not sufficiently large; it ought to be given in the dose of from 2 to 3 grammes in 24 hours.

4. Dr. Piorry, after a sketch of the different conditions generally comprised under the name of puerperal condition, and a description of the peculiarities of the puerperal state, comes to the conclusion that puerperal fever is not "*une unité morbide*," but the reflex of one or more of these puerperal phenomena, exaggerated to a real disease. And after all, there might be a virus which propagates the fever, which, however, spontaneously developes in patients who had no communication previously with other puerperal patients. We, therefore, have not to deal with a specific puerperal fever, but with a patient suffering from septic uteritis, phlebitis, modified by the presence of putrid matters in the womb, metropéritonitis, septic peritonitis, septicæmia, pyæmia, pleuritis, arthritis, retention of fœces and gas in the intestines simulating peritonitis, hypæmia, or a considerable elevation of the intestines and the diaphragma, owing to aforesaid circumstances, with difficult respiration, dilatation of the heart, pulmonary congestion, accumulation of phlegm in the air-tubes, hyposemia and death. By taking this view, the indication for treatment is not derived from a disease called puerperal fever, but from its elements, and against every one of its elements, as pointed out above, the treatment must be directed. In specifying the remedies to be applied against every one of the original diseases, the author lays great stress upon the necessity of cleansing injections. Dr. Piorry has not lost one single patient in the pitié, from puerperal

peritonitis, for five years, owing to these injections. Against accumulation of gases or feces, cathartic injections and oily frictions in the direction of the intestinum crassum, have had a wonderful effect.

5. DR. HERVEZ DE CHEGOIN declares for the specific nature of puerperal fever, it being a disease for itself, which can exist independently from any inflammatory affection. There are two varieties of puerperal fever; one a putrid, one a purulent puerperal fever; putrid or purulent infection starting from the uterus being the cause of the disease in question. All prophylactic remedies are of no avail before we know which form we will have to deal with. After even the safest delivery, injections into the womb have to be made whenever we suspect that small particles of the placenta or the membranes are left behind, or a foetid discharge begins to issue from the genitals. But as soon as the putrid infection or puerperal fever is established, we have to fulfill three indications, viz.: 1. To remove the cause. 2. To neutralize it. 3. To put the organism in a proper condition to resist the toxic influence. The remedies for this purpose are injections, cathartics or sudorifics, antiseptics and tonics. In the purulent form, at the beginning, an energetic antiphlogistic treatment must be applied.

6. DR. TROUSSEAU does not acknowledge a fever peculiar to women in childbed, but only a fever peculiar to wounded men and women. In the epidemic of 1855, when so many women died from the fever, it was very remarkable that an unusually large number of children fell under umbilical phlebitis, peritonitis, pleuritis, etc.; children of mothers who were never taken with the disease, besides many children still-born with peritonitis from a healthy mother. The men, upon whom operations had been performed in the surgical wards, died in great numbers from inflammations of the serous and synovial membranes, from putrid fever, as soon as in the adjacent lying-in wards the puerperal fever began to develop. The fever appears in different forms, as a purulent, a putrid, or a nervous typhus. These different affections do not belong exclusively to women in childbed, but are observed in the foetus as well as in male patients. In the epidemic which Dr. Lorrain has described, 7 or 8 children died in utero with pus and false membranes in the peritoneum. In 1842, Dr. Trousseau described as puerperal fever of the foetus, certain forms of erysipelas, phlebitis, and muguet of new-born children. Also, Dr. Lorrain has already pointed out the resemblance of the foetal and the puerperal state, comparing the umbilical wound with the denuded surface of the womb, and calling the purulent secretion from the navel, *umbilical lochia*. From this point, absorption followed by phlebitis is easily established, and these children die from erysipelas, putrid inflammations, or diphtheritis. But some women are taken with puerperal fever at the beginning of labor, no wound being as yet established (Tarnier, Dubois, Danyau), and even midwives attending fever patients, during (Depaul, Delpech, Danyau, Dubois), or even some time after menstruation (Tarnier), have been taken with the disease. In women who died from puerperal fever, purulent metastatic collections have been found in the pleura, in the articulations, etc. Dance and Tessier found the same lesions in the



men who died from traumatic fever. This traumatic fever of women, children, and men, has a specific cause ; it is a morbid substance which enters the system, finding especially upon wounds a fertile soil for development, from whence it is diffused throughout the system. This specific materia does not always originate from the female, and does not belong to her exclusively. The only thing that makes women in childbed more apt to get this fever, is the peculiar condition, by which she is less liable to resist the influence of morbid causes. With regard to treatment, not a single remedy has given satisfactory results ; a remedy successfully applied to-day in one locality, fails to-morrow or in another quarter.

7. DR. P. DUBOIS distinguishes two groups of morbid phenomena in puerperal women. In the first instance, the disease begins with a chill, followed by fever, flushed cheeks, violent headache, a moist whitish or yellow tongue, quick respiration, a moderate pain in the lower part of the abdomen, while the womb is painful when touched through the flaccid abdominal walls, the secretion of milk is disturbed. The second form is in some respects similar to the foregoing condition ; it has a chill at the beginning, fever, headache, alteration of the features and respiration, abdominal pain, suppression of milk ; and still the character of all these symptoms differs considerably from those of the first order. The chill is more intense, of longer duration, and nearer to the time of delivery ; the face, instead of being red, is pale and greatly altered, the respiration rapid and oppressive ; there is a constant agitation ; the abdominal pain is stronger, and taking a larger surface, the abdominal walls are bulged from meteorismus, and, instead of constipation, diarrhoea is present ; the disease is almost always fatal. It is the second form only that comes under the head of puerperal fever, while the former affection may increase to such a degree that it becomes equivalent to puerperal fever in its ultimate results. The only cause of puerperal fever is a primitive alteration of the blood, the nature of which is hitherto unknown ; neither the theory of purulent nor of putrid infection as a cause of the fever are admissible.

8. DR. CRUVEILHIER.—There are two forms of puerperal fever ; a benign and a malignant form. The former consists of a uterine phlebitis, not surpassing the obliterating or adhesive stage, which is at times combined with partial peritonitis ; the other form, or the classic puerperal fever, has four striking characters, viz.: 1. Chill at the beginning. 2. Peritonitic abdominal pains, before, during, or after the chill. 3. Profound alteration of the features. 4. Extreme weakness, frequency, and softness of the pulse. During the five epidemics observed by Dr. Cruveilhier, every kind of treatment was tried, but to no avail. In the epidemic of 1832, from 15 women affected with the fever, 10 were dead on the fifth day, and the cholera which prevailed at the same time in Paris, left not by far an impression upon the orator's mind similar to that of puerperal fever, which he used to call puerperal typhus. The only remedy that could have an influence upon this dreadful scourge, is the closing up of all lying-in hospitals, and have the women attended at their residences. It is a contagious miasmatic disease, like the hospital gangrene. With



regard to the pathological anatomy of puerperal fever, it is astonishing how little time is wanted for the production of pus in this disease. Dr. Cruveilhier has found pus in the peritoneum 24 hours after the invasion of the disease. The tendency to formation of pus is the great feature of puerperal fever. After peritonitis, purulent subperitoneal cellulitis is most frequently met with. The second chief lesion owing to puerperal fever, is purulent lymphangitis. This is specific to puerperal fever, and met with in no other disease. The presence of pus in the uterine veins is by no means as often found as pus in the lymphatics. In all, or almost all, post-mortem examinations performed from June, 1830, to September, 1832, purulent lymphangitis was found, while only 8 cases of purulent phlebitis presented themselves; and while purulent phlebitis is often observed unconnected with peritonitis, the lymphangitis is almost always found in connection with peritonitis or cellulitis. The metastatic abscesses in liver, lungs, etc., are always the consequence of phlebitis, but never originating from lymphangitis, as the interposition of the lymphatic glands prevents the spreading of purulent infection. It is easy to distinguish both lymphangitis and phlebitis from each other; the purulent veins always exhibit traces of inflammation, their walls are thick, brittle, injected all over their external tunic, adherent to the adjoining tissues, surrounded by a pseudo-membranous layer, or containing fragments of coagulated blood. The lymphatics have very thin and generally transparent walls, and are in no connection with the neighborhood; the pus they contain is of a very pure quality, looking like milk, and in tracing their course they are found to run towards the lymphatic glands, which are injected with pus. Besides these chief characters of puerperal fever (peritonitis and lymphangitis) the third in frequency is uterine phlebitis, the fourth, purulent phlebitis. With regard to the question whether the fever is the primitive element, or the local inflammations, Dr. Cruveilhier proposes that puerperal fever is fever and inflammation at once, both being the consequence of one common cause, viz.: miasmatic infection. The best name to express the nature of puerperal fever would be: *traumatic fever of women in childbed*, as a recently delivered woman may be compared exactly to a person upon whom a great surgical operation has been performed.

9. DR. DANYAU.—Puerperal fever is a disease of miasmatic origin, which entering and poisoning the blood, renders it liable to produce in most cases, very rapid inflammatory deposits. It is a remarkable fact, that the epidemic spreads at times over whole cities, countries, and even continents. In 1819, for instance, the fever was observed at the same time at Vienna, Prague, Dresden, Würzburg, Bamberg, Ansbach, Dillingen, in many towns of Italy, at Lyons, Paris, Dublin, Glasgow, Sterling, Stockholm, Petersburg. Some of these epidemics even extended to the domestic animals, to the bitches, for instance, during the epidemic of 1787 and 1788, at London; at Edinburgh, in 1821; at the same time cows were affected in several parts of Scotland, and hens in the neighborhood of Prague, in the epidemic of 1835. To prove the miasmatic character of the disease, Dr. Danyau reports several cases where children died shortly after confinement,

from mothers who were taken with puerperal fever. With regard to the question of transmissibility of the miasma from one person to another, Dr. Danyau reports a great number of facts, which seem to show that an accoucheur, who attended a lady stricken with the fever, is apt to propagate the disease to other women in childbed. Dr. Semmelweis' theory of cadaveric infection is not considered as established beyond doubt, still it would be unsafe to attend a woman in confinement immediately after performing a post-mortem examination, without taking such precautions as may seem efficient to lessen the probability of transportation of putrid effluvia. The sulphate of quinine has been tried by Dr. Danyau, but not fulfilled what was expected from it. Dr. Piédagnel's prophylactic remedy (sulphate of quinine and carbonate of iron) was tried in three hundred women, near their full term, and the result was, that the proportion of severe cases and deaths was smaller among the women who were treated in this way, compared to those who underwent no prophylactic treatment, while on the other hand, the value of this remedy becomes very questionable, when eight women out of one hundred exhibited serious puerperal diseases, and five died from three hundred women confined in a hospital, which at the time of the experiment was not subjected to the epidemic. The only effective remedy would be, perhaps, the suppression of all lying-in hospitals, but in doing so, the great advantage for instruction would be lost, a host of homeless women would be delivered under equally disadvantageous circumstances, and very likely the fever would spread more extensively in the cities than it has done before. Instead of abolishing the hospitals entirely, it would be better to increase their number, and use the different wards in rotation; airing, fumigating, and whitewashing the rooms as they are emptied.

10. DR. CAZEAUX insists upon the alteration of the blood in puerperal women, and its influence upon the production of the disease in question, the inflammatory character of which cannot be doubted. He does not admit a puerperal fever as coming from a specific outside influence. It is the intense alteration of the blood that renders inflammations of women in childbed so disastrous. All diseases taking women in childbed take a very severe course, such as scarlatina, smallpox, pneumonia, pleuritis, etc.; why should not inflammations, peritonitis, lymphangitis, be more disastrous with women in childbed than otherwise. This propensity to disastrous diseases, naturally increases at the time an epidemic prevails, as is the case with bronchitis, pneumonia, etc., and it is not necessary to acknowledge a specific influence producing puerperal fever. With regard to treatment, Dr. Cazeaux asserts, that he never saw a woman die who could be salivated by small doses of calomel, but it is difficult to bring on salivation very quickly.

11. DR. BOUILLAUD declares for the non-essentiality of puerperal fever; he does not consider it as a fever *sui generis*; it is a traumatic fever, modified by a peculiar condition of the blood of women in childbed. The puerperal state is a kind of intermediate condition between health and disease (un état semi-pathologique); its likeness with the condition of wounded persons is so generally admitted, that

no serious contradiction has been sustained on this point ; the puerperal state constitutes a morbid predisposition in general, and an evident predisposition to certain local and general affections, viz., inflammations and feverish reaction ; inflammations developing during the puerperal state, have a marked tendency to suppuration ; the puerperal state does not only influence the generative organs, but has a bearing upon the entire system ; therefore the puerperal state is an aggravating circumstance in all inflammatory or other diseases arising during its existence. From these considerations, it is evident that the word *puerperal* may be applied for those local inflammations with a fever which seize upon the puerperal woman ; it represents the modifications which the puerperal state contributes to these affections. Dr. Bouillaud proceeds to give a historical sketch of the previous discussions on puerperal fever in France, and considers some of the weak points of the speeches of his adversaries, especially of Drs. Trousseau and P. Dubois, and shows that puerperal fever is not a fever *sui generis*, because neither its seat, nor cause, symptoms, evolution, course, treatment, mortality, or denomination, have anything peculiar. The purulent and putrid infection of the blood are sufficient to explain the general phenomena which constitute puerperal fever.

12. DR. DUBOIS, in a second communication, subjects the facts called forth to prove the possibility of transmission by contagion, to a rigid examination, and comes to the conclusion, that this way of propagation is far from being established beyond doubt. He believes that the conditions necessary for the development of puerperal fever exist already, before labor begins, in a certain number of subjects, a fact which can not be explained either by putrid and purulent infection, or by the so-called uterine tranmatisme. With regard to treatment, nothing can be done against the veritable puerperal fever (Dubois's second class, Beau's peritonitis supra-umbilicalis), while its milder form may be overcome by different remedies, such as quinine, ipecac, tartar emetic, bleeding, etc.

13. DR. PIORRY, in a second communication, insists upon the fact, that in a great number of cases the decaying contents of the uterus, and the putrid infection of the blood from this source, constitute the so-called puerperal fever, and he thinks that the discussion in the Academy is only a fight about words, as the different speakers agree, without knowing it themselves, upon the nature of the disease. He proposes the name of septicemia, as best designating the sources of the disease, viz., from putrid infection from the uterus, and by the respiration of an atmosphere pregnant with septic particles. The septicemia originates as well from a wound cut with a scalpel, containing cadaveric blood, as from a bed-sore in putrefaction, and from a place overcrowded with patients. The admission of this septicemia explains the putrid accidents, as observed in men, the fœtus, and wounded persons during a puerperal epidemic.

14. DR. DUBOIS, in a third communication, expresses his belief, that the suppression of the lying-in hospital would not effect a considerable change in the rise and spreading of the disease, as it is well known that very often the epidemics in hospitals are preceded by

severe outside cases, and epidemics in even the smallest cities have been observed of a more disastrous character than those seizing upon hospitals. The only justifiable means to prevent the disastrous spreading of the disease, consists in a profound modification of the present lying-in asylums. In the neighborhood of the present buildings, new ones ought to be erected fit to receive six or eight hundred women every year. These should be divided into two principal sections of equal capacity, each one of these sections to be subdivided into different rooms, each capable of receiving ten beds, which must be separated from each other by a larger space than is generally allowed in ordinary hospitals. To this construction, the best mode of ventilation is to be added. The small rooms ought to be used in rotation, each of them to be thoroughly aired and cleansed after having been in use for a length of time. At a time when an epidemic begins to make its appearance, the hospital affected ought to be closed entirely, and the women attended at their homes.

15. DR. TROUSSEAU, in a second communication, resumes his views under the following heads : 1. The puerperal fever does not differ from the so-called chirurgic fever ("purulente, de resorption"); 2. In the great majority of cases, the placental wound occasions the disease ; 3. Its cause exists in a specific principle, only known in its effects ; 4. It is not impossible, that even a person not wounded, might be affected by the disease during an epidemic. A healthy woman coming from the country to Paris to be delivered in a few hours, is taken there with a violent fever and dies in a few days : a disposition in the blood is not required ; she catches the disease as she would the cholera, the yellow fever, or the intermittent fever. In puerperal fever the general affection does not exist previous to the local lesions, except in a few very rare instances, nor is the vascular inflammation of that great importance imputed to it. Phlebitis exists in almost every case of delivery ; it is to be found with every wound ; the adhesion of the coagulated blood with the walls of the vessels, is a sign of present or past inflammation. Phlebitides of great extension, spreading from the foot up to the *venæ iliacæ*, the *pneumonia alba* doleus, make very often not the least impression upon the system, producing scarcely any febrile reaction. Why, then, should phlebitis be of such vast importance in the puerperal state ? Some other specific influence must be added to the phlebitis, in order to render its presence so very disastrous as it is in puerperal fever. Moreover, it has been demonstrated that the pus-globules are too large to pass through the capillary vessels ; even the presence of laudable pus in the blood does not make any considerable impression upon the system, a fact well proven by experiments, while putrid particles injected into the blood produce violent general accidents. Nor does the serum of pus, if absorbed, as it happens in tuberculous patients, produce symptoms similar to puerperal fever, but only what is called colliquative symptoms. At times it happens that the most insignificant operation, as the depression of a cataract, the opening of an abscess, leads to traumatic typhus and death ; there must be a specific cause to produce these fatal effects. Why is it that women outside the hospital, where they

live in filth and dirt, in the most unhealthy locations, do not die from this fever? Why is it that at times when the hospitals are over-crowded, not a case of fever is observed, when at other seasons they die by the dozen, although the number of women in confinement is comparatively small? Dr. Trousseau firmly believes that the contagious miasma of traumatic and puerperal typhus, remains in a latent state, in the surgical and obstetrical wards, rising to activity at certain days under certain unknown conditions. If the hydrophobia proceeds from an infecting bite, the syphilis from an infecting ulceration, then the traumatic fever must proceed from an infecting wound, and the puerperal fever from an infecting placental wound. In some very rare instances, the infection in puerperal fever might be established "d'emblée," *i. e.*, not entering through the wound, but through the lungs or skin.

16. DR. VELPEAU read some portions of his former articles on puerperal fever, written about thirty years ago, thus showing that all that has been said pro and contra is not much more than a repetition of former ideas. For his own part, Dr. Velpeau has not changed his mind since the time of his first writings. Puerperal fever is a peritonitis, a lymphangitis, a phlebitis, a purulent or putrid infection, modified by the puerperal state. The disease is a specific disease, inasmuch as every disease has a more or less specific character. With regard to treatment, Dr. Velpeau adheres to his old propositions, *viz.* : bleeding, calomel in small doses, mercurial inunctions (10 grms. every two hours), and afterwards an enormous flying vesicatoire upon the abdomen.

17. DR. GUERIN considers the more or less perfect contraction of the womb after confinement in connection with puerperal fever. In ordinary cases the fundus uteri is situated in a line with the umbilicus immediately after delivery, while, during the following three or four days, it gradually contracts so that its vertex sinks down as far as the symphysis pubis. In puerperal fever patients, the fundus not only remains near the umbilicus during the entire existence of the disease, but the womb even contracts or swells up according to the changes of the disease for good or evil. The consequence of this flaccid state of the womb is the permanent existence of the cavity in the uterus, which is filled with clots of blood or the lochial secretion; the placental wound is extended, the vascular orifices remain gaping, and a permanent contact with the atmosphere is established. Owing to this, the uterine wound instead of being closed and healing, *quasi per primam*, is exposed to the air and suppurates; the contents of the uterus decay by the touch of the atmosphere, and the womb is filled with a fluid mass in a state of putrefaction. Hence the fatal consequences: chills, fever, poisoning of the blood, secondary inflammations. This condition of the uterine wound alone would not be sufficient to produce the puerperal fever; the consequences of this abnormal condition are complicated and influenced by the peculiar disposition of women in childbed, by the condition of the air in which the patient is placed, and by many other casualties. The liquids contained in the womb do not only infect the blood by resorption, but pass into the abdominal cavity by way of the tubes, which are often

found filled with pus, without offering themselves the slightest trace of inflammation. This explains the fact that the peritoneal exudation has its principal seat upon the superior layer of the intestines. The weight of the atmosphere, in free communication with the womb, presses the liquids contained in the womb through the tubes to counterbalance the diminished intraperitoneal pressure. For treatment Dr. Guerin proposes the ergot of rye to be given immediately after confinement, and those remedies which apply to every single secondary symptom as it makes its appearance.

18. DR. CAZEAX, in a second communication, answers to some objections raised against his theories by some of the former speakers, and endeavors to demonstrate the incorrectness of Dr. Guerin's views.

19. DR. DEPAUL, in a second communication, defends himself against the aggressions of several orators, and goes on to show that Dr. Guerin's new theory of puerperal fever is absurd and unworthy of a man of his standing. He continues to defend his opinion, considering puerperal fever a specific disease. He points to the fact that the disease in question makes its appearance in an epidemical form, as a general rule, analogous to all specific diseases, cholera, typhus, typhoid fever, and adds another example to prove the contagiousity of the disease. In all post-mortem examinations the same alteration of the blood is found and can be easily demonstrated, this being in some instances the only pathologico-anatomical result, while the local lesions are of a very varying character. The principal character of this alteration is a change in the blood-globules, which have become unfit for hematosis, not being reddened any more by the influence of oxygen (Vogel). Hence the great anxiety observed in puerperal fever patients, and the great hindrance in respiration. Dr. Depaul asserts that he, for himself, has already met with 15 cases where no local lesions could be found, although the post-mortems were made with the greatest care possible. Another fact worth mentioning, is the multiplicity of local lesions and their peculiar character, a puerperal peritonitis, offering a very different aspect from a simple or traumatic peritonitis. The only point of comparison of purulent infection with puerperal fever, is the fatal termination. It is wrong to find analogies between the inner surface of the womb after the delivery, and an artificial wound. Where is the pathological condition, where the divided skin, muscles, nerves, bones and arteries? Very justly Dr. Depaul remarks, that there is no such thing as milk fever; wherever a woman has chills or is feverish, there is some pathological influence present, which we have to find out. The putrid infection is equally different from puerperal fever in its symptoms and cause, which may appear in a chronic or an acute form; it is never connected with a peritonitis, as is puerperal fever. Neither Dr. Beau's quinine, nor Dr. Velpeau's large blisters, have an influence upon the real puerperal fever; the very few cases cured were those treated with mercury. In conclusion, Dr. Depaul repeats his conviction, that the only justified and effective prophylactic remedy is the closing of lying-in hospitals. In 1837 a Society was formed under the name of Société Médicale d'Accouchement. From this time to 1841, 1,258 poor women

were attended at their homes, and what was the result, not one woman died, while at "La Clinique" 22 died out of 623.

20. DR. GUERIN, in refuting the attacks of Drs. Cazeau and Depaul, says that he considered the want of retraction of the womb only as the local cause of all the many secondary evolutions of puerperal fever, admitting another influence which produced this permanent swelling of the uterus. To prove his theory of migration of pus into the peritoneal cavity through the tubes, Dr. Guerin mentions several experiments of his own, demonstrating that the peritoneal cavity may contain a quantity of air in certain conditions, and quotes from Dr. Behier's and Dr. Tacquemier's works on peritonitis, observations confirmatory of his own views.

21. DR. BEAU, in a second communication, insists upon the inflammatory nature of puerperal fever, of which the peritonitis is the principal character. Phlebitis is often connected with peritonitis; when found alone, it is a phlebitis, and not a case of puerperal fever. With regard to treatment, Dr. Beau insists upon the *early* administration of the quinine; it must be given at the very first symptoms of the fever. During an epidemic, the resident physician must watch the delivered women, and begin the treatment at the very inset of the disease.

22. DR. DANYAU, in a second communication, reports the experience of an intelligent midwife, a former pupil of his, with regard to the famous 12me. arrondissement, the average number of deaths of which community Dr. Tarnier reports to be 1 out of 322 delivered women during 1856. At the beginning of 1834, a very disastrous epidemic prevailed in this district, and during 5 weeks in February and March, out of 35 women, 20 were taken sick with the fever, and from these 20 women 19 died from puerperal fever, most of them a few days after delivery.

The great diversity of opinions expressed in the Academy rendered it a difficult task for the last orator, M. Guérard, to give a resumé of the entire discussion. First of all, M. Guérard rejects the opinion pronounced by some of the speakers, that the inner surface of the uterus, after delivery, was akin to a wound after a surgical operation. The act of placental detachment is unconnected with any lesion of continuity, and the secretion of the placental surface is not pus, but an albuminous fluid; a purulent discharge from this place is only observed in those cases where a superficial inflammation of the uterine tissue existed in the neighborhood of the insertion of the placenta. The great variety of opinions in general may be caused by the circumstance that some of the orators had very ample occasion to study the disease, while to others only a comparatively small field of observation was allowed. Among the former are Depaul, Dubois and Danyau, all of whom agree as to the principal points involved in the question. Finally, the varying characters of the different epidemics may partly account for the diversity of opinions on the nature of the fever. Depaul's, Dubois', and Danyau's views, are comprised in the following theses: Women in childbed are exposed to different diseases, but the name of "puerperal" disease belongs only to those affections which develop under the specific influence of the puerperal state. The true nature of puerperal fever is character-



ized : 1. By the time of invasion (in the first 4 or 5 days, and generally in the 48th or 50th hour after delivery, very seldom after the 8th day). 2. By the succession and quality of the symptoms. 3. By its anatomical character, consisting of a specific alteration of the blood, with inclination to rapid formation of pus. 4. By its transmissibility, by infection, perhaps by contagion, and direct inoculation. Most of the speakers considered the epidemic influence, and the over-crowded state of lying-in hospitals, as the principal cause of the eruption of the fever ; but these coincidences are often wanted, while the course and malignity of the disease are the same. Almost all agree as to the curative treatment ; our art is powerless, and the right way has yet to be detected. The principal remedies are the opium, the quinine, and the veratrum viride ; the latter, recommended, by Dr. Barker of New York, has not been tested in Europe. The opium has been very successfully employed by Dr. Faye of Christiania, in 1849, while in other epidemics it seemed to have no influence whatever. The use of quinine, principally advocated by M. Beau, was useless in the hands of others. Therefore Depaul and Cruveilhier moved to abolish the larger lying-in hospitals, and supplant them by smaller ones with 12, 16 or 20 beds. This procedure Dr. Danyau believed to be injurious for the education of young physicians and midwives, and he therefore proposed to retain the hospitals existing, and modify their construction.

The discussion of the New York Academy of Medicine opened in 1857, and closed this year. It is void of that brilliancy which is peculiar to French orations ; it is void of that vast amount of experience collected for decenniums in French hospitals, and still, to say the least, it is equally important. The orators were few in number, but all that was said was well supported by a stringent logic and a sound experience. The discussion has brought forward in bold relief two remedies, which are at least worthy a further trial, and this is a decided advantage over the results of the French discussion, which has radically destroyed what little hope was left for one or the other therapeutical means to battle against this scourge of humanity.

The subject of puerperal fever was brought up for discussion in the New York Academy of Medicine by Dr. JOHN W. FRANCIS. He admits its inflammatory character, and is not willing that this disorder should be restricted in its seat to inflammation of the peritoneal lining, thus nosologically denominating the disorder "puerperal peritonitis." Dr. Francis is satisfied of its contagious nature from the authority of Gordon, and from what he has seen both abroad and at home.

DR. JOSEPH M. SMITH, after some preliminary remarks on the contested points regarding puerperal fever, says, that in rejecting the opinion that puerperal fever is a disease *sui generis*, we must also reject the idea of its propagation by a specific contagion. That the disease is communicable there is no doubt ; but it is through the agency of a poison generated in a mode totally different from that peculiar to small-pox and measles. Prof. Smith then proceeded to consider the *special etiology* of puerperal fever.

The conclusions at which Prof. Smith arrived, are, that puerperal



fever sometimes arises from the noxious air generated from the foul discharges of puerperal women in crowded and ill-ventilated lying-in hospitals ; sometimes from the emanations of patients laboring under typhus fever, erysipelas, and gangrenous diseases ; sometimes from the emanations from the human body dissected after death ; and sometimes from the absorption of putrescent matters lodged in the uterus and vagina after parturition. It would appear, also, from this inquiry, that the miasms of typhus, erysipelas, and puerperal fever are severally capable of producing any one, or all, of these diseases ; and that they may attach themselves to the persons and clothing of mid-wives and physicians, and thus be transported from these sources, to the chambers of lying-in women. The more ordinary form of disease, induced by the febrific effluvia in question, is typhus and its modification, typhoid fever ; while puerperal fever, and hospital erysipelas, are but varieties of that disease, taking their forms from the peculiar predisposing conditions of system.

The following facts are important : 1. Let the physician take care. 2. When it breaks out in a hospital, thorough resort to disinfecting agents and ventilation, and dispersion of patients is necessary.

PROF. CLARK concurs with Drs. Francis and Smith in regard to the communicability of puerperal fever. With regard to its connection with typhus, it seems that there are no fixed relations between these diseases. I am aware, he says, that puerperal women have been placed in beds near those who have had typhus fever, and have died of puerperal fever ; but unless these cases are adduced in sufficient number to balance the cases on the other side, they may be but coincidents. No relation has been established between the typhus and puerperal fevers, as far as the City Inspector's reports are concerned. Prof. Clark here gave a statistical review of deaths from puerperal disease and from typhus fever, from 1830 to 1853, from which it appeared that the numbers somewhat increase together ; but the proportions in which they increase and diminish, showed very few analogies between the two diseases. The relation of puerperal fever to erysipelas, at Bellevue, has long been remarked. My impression is that there is a relation between the two ; this is the prevailing opinion there. A few days ago, when the puerperal fever broke out there, it was ascertained that erysipelas was prevailing to some extent in the surgical wards.

In looking over the City Inspector's report of deaths for fifty years, it is found that from 1804 to 1830 the ratio of mortality from these diseases is very variable ; the numbers are, however, too small during this period to be of much value, but for the last twenty years, when the number from each is considerably increased, it will be remarked that they show a decided tendency to increase together, and to diminish together, the ratio of mortality varying but little.

Hospital gangrene differs from erysipelas probably more in its appearance and its results than in its nature. It is, perhaps, erysipelas intensified, and somewhat modified in the tendency to spread over the body. But as the two occur under the same circumstances, and as they certainly have close alliances, what has been already said of one can hardly fail to be true of the other.

With regard to pathology, Dr. Clark feels compelled to withhold his assent to the doctrine that this is a *fever*, and a fever only, under any circumstances. He has not yet seen a single puerperal woman die of an acute febrile disease of short duration, in whom there could not be found, on post-mortem examination, some lesion of an inflammatory character, while he admits that other writers have published observations of a different result. He thinks that in every case where a full examination is made, one of the four lesions (peritonitis, phlebitis, lymphangitis, endometritis,) will be found. Inflammation of the lymphatics is more common than inflammation of the veins. It is very often met with, to a limited extent, in the broad ligament, when the chief lesion is peritonitis. Another form of disease is that which Gooch, Simpson, and Tyler Smith, regard as independent of anatomical lesion. He says, the view which I wish to present of that class of cases is that they are probably all, in reality, pyæmia, resulting from inflammation of the inner surface of the uterus. In order that what I have to say on this point may be better understood, we will consider one or two points in the anatomy of the uterus after parturition.

The uterine sinuses remain open, or rather openable, for at least ten days. Why do they not bleed? I do not know that any one has made an exposition of it? If I see it correctly, these sinuses are guarded by a valvular opening like that of the ileo-cæcal valve. There are two folds, the longest is the innermost one; through this inner fold there is a muscular fibre well marked, and, also, a smaller muscular fibre running through the shorter lip; these muscular fibres are continuous with the muscular fibre of the body of the uterus; when the muscular fibre of the uterus is well contracted, the shorter lip is drawn down on the inner one so that no blood escapes. When the muscular tissue is relaxed, the mouths open in this way (illustrated by two pieces of paper, the one overlapping the other, like the two parts of the ileo-cæcal valve, and the ends approximated); thus it is that bleeding occurs when the uterus is relaxed, and hence the necessity of having the uterus contract to prevent hæmorrhage.

If the open body of one of these sinuses be lifted, a sort of sac will be found one-sixteenth of an inch or so in depth; and, looking toward the wall of the organ, another little mouth, sometimes two or more; whether that has a muscular fibre I am unable to say.

Inflammation of the inner surface of the uterus is, also, inflammation of the valvular mouths of the uterine sinuses, since they are really a part of this inner surface; hence endometritis, as it seems to me well to denominate it, is of necessity a limited phlebitis, and inflammation of this inner surface of the uterus is of common occurrence, in one or other of its forms. Cruveilhier has described it as attended by an exudation which is soft, vascular, and areolar, the meshes of which are filled with blood clots. I have seen the exact copy of what he represents in Plate VI., of Book 4; and can state that the singular appearances there illustrated, are due to fibrin, pus, and blood; the first forming a velvety surface on the interior of the uterus, which holds in its fibres the other two, and that there is no

proper vascularity in this exudation ; it is nothing more than one of the least frequent of the results of endometritis. The more common results of the inflammation, are exudations of a creamy consistency, varying in color from a pale pink, through a brick-dust to a brownish red, or sanaceous hue, with or without a firmer fibrinous layer, in contact with the uterine surface ; in rare instances the color is the dark green, represented by Cruveilhier.

When this endometritis exists with the symptoms of puerperal fever, though peritonitis be absent, and though pus be not found in the lymphatics or veins of the uterus, yet we are not at liberty to infer that the disease is a fever and nothing else. Here is a source of purulent contamination. That pus is not found in the veins is not proof that it does not exist in the circulation ; formed within the mouths of these sinuses, it would be readily washed into the circulating blood, and produce the symptoms of pyæmia. Indeed, the proof of such contamination I have seen in the deposit of pus within the tissue of the liver.

DR. REESE remarked, that a law should be enacted to prevent persons from attending on puerperal women, after attending cases of erysipelas, hospital gangrene, or autopsies. He had never seen a case which justified the view of this disease being contagious. He had not found local lesions sufficient to account for its fatal results.

DR. SMITH said that Prof. Clark did not discriminate between typhus in males and typhus in females ; if he had excluded the typhus in males, perhaps the results would have been more equal.

DR. CLARK answers that, though he is unable to furnish statistical accounts at present, he is satisfied that typhus fever takes its full proportion of females, and in epidemics more females are lost, because females are more about the sick. He believes to have seen the cases which Gooch, Simpson, and others describe as puerperal fever, without lesions, and to have never failed to find the evidences of endometritis. Puerperal fever is a purulent contamination of the blood, in a manner already explained, and the patient dies, not of endometritis, but of pyæmia. A febrile element cannot be excluded from this disease, but it is accompanied by, if not dependent upon a local lesion. Lately a form of puerperal fever was observed at Bellevue Hospital which was not noticed on former occasions, the nature of which has not been so thoroughly studied by the profession as that of other forms. Its prominent lesion is inflammation of the inner surface of the uterus, with evidences of general purulent contamination ; and the disease is unusually protracted. The patients have lived in several cases from ten to thirty days ; and the *post-mortem* examinations have demonstrated the existence of secondary purulent deposits, and pus on the inner surface of the uterus, and in its veins or lymphatics. This form of disease is more insidious in its approach ; is often devoid of the symptoms that mark the outset of the ordinary attacks of puerperal fever, and is more allied to typhoid fever. The minutes of ten cases, illustrating the foregoing remarks, are given by Dr. Clark. In most of these cases, all the symptoms on which reliance usually is placed in the diagnosis of puerperal fever were absent at the commencement. No chill, no headache, no

pain in abdomen, no rapid rise in the pulse ; in fine, no well marked period of invasion. The disease was marked by its *gradual* progress. In the first narrated case, the characteristic point was the recurrence of the chill, and the long perspiration that follows the chill, or of free perspiration without chills. The solitary glands of the intestines were swollen, filled with a milky fluid, and stood out on the surface of the mucous membrane, in certain parts, like pustules, as they often do in smallpox and cholera. Dr. Clark remarks, that he had been induced lately to attach importance to this lesion and its connections with pyæmia, having met with it frequently during the epidemic here described ; and in some cases of purulent infection unconnected with the puerperal state. Thus the analogies of this case, all ally it to common purulent phlebitis. Such it undoubtedly would have been considered, had it occurred in any other than the puerperal state, or even in this state, perhaps, if it had occurred alone. But its associates are no less important than the disease itself. It occurred at the end of a series of eleven cases, four of which had the peritoneal inflammatory lesions, and six appeared to suffer mainly from uterine phlebitis and pyæmia. Nine of the other ten cases occurred between the second and the twelfth of April. Whether this form of phlebitis should be considered a form of puerperal fever, may admit of discussion, but it certainly appears in an epidemic form.

DR. BARKER feels compelled to differ from Dr. Clark's views, having been accustomed to regard the local lesions as being the relation of an effect, instead of a cause. There is a proportionate relation between the intensity of the symptoms and the amount of the local lesion. Puerperal fever is a distinct essential disease, and associated with it are most generally lesions of the peritoneum, or of the veins of the uterus, etc., while we may have peritonitis, or phlebitis, or any other of the local inflammations, even in the puerperal women, and not have puerperal fever. Puerperal fever is a cymotic disease, having an essentiality altogether distinct from inflammation of any tissue, or structure of the body, even in a puerperal woman. The puerperal state, *per se*, cannot alter in any sense the laws which govern inflammation. It undoubtedly does increase, under certain circumstances, the susceptibility to inflammatory action ; but it may, and often does, produce a condition of the system directly antagonistic to inflammation, and it is precisely in this latter condition that we find the most virulent, the most intractable forms of puerperal fever. Puerperal fever has no anatomical character. The structural lesions are inconstant in their seat and their amount. These lesions are often not sufficient to influence the progress of the disease, or to explain the cause of death. The most malignant form of the disease offers the fewest and the least striking structural lesions. The longer the disease continues, the more prominent and the more manifest are the organic lesions. Does not this prove that the lesions are consecutive or secondary ? That there is a primitive source or original cause of vital depression, which sometimes destroys life so rapidly that there is no time for the development of these secondary morbid alterations ? The symptoms are not then the result of these lesions, but the result of some specific agent, some

morbid poison, which subsequently develops the autopsic lesions. We may have inflammation, even to an intense degree, of any of the organs in a puerperal woman, in which the principal lesions of puerperal fever are found, and yet the disease will lack some of the essential characteristics of puerperal fever. We may have f. i. uterine phlebitis, and not have puerperal fever. There is a great contrast between the two as regards the mode of attack, symptoms, and treatment. The difference being that the one disease follows the laws of ordinary inflammation, and that in the other the toxæmic origin of the disease gives it quite a different character. These differences were strikingly illustrated in the recent epidemic at Bellevue Hospital. In the latter part of January, succeeding a period of almost unparalleled cold, came that long spell of warm, damp, close, foggy weather. This change had scarcely set in, when one after another, as the women were delivered—these wards having been previously perfectly healthy—they began to develop, one pelvic cellulitis, another peritonitis, another metritis, all of the asthenic type, and with an early tendency to gangrene or suppuration; while scarce one escaped without a threatening, at least, of those terrible torments of nursing women, sore nipples or mammary abscess. Indeed, so well established did this state of things become, that a pulse of 120 and a flushed cheek were looked for as matters of course on the morning after confinement, and the pleasant soft pulse and cool skin of the physiological recovery were luxuries which the attendant physicians dwelt long and lovingly upon, when, at long intervals, they presented themselves. These cases, notwithstanding that they bore the outward semblance of inflammations, were yet, in their mode of progression, constitutional effects, and indications for treatment, so different from the ordinary phlegmasiæ, as to lead Dr. Barker to announce his belief in the specific character of these diseases; that the quasi-inflammatory processes taken on by these organs were, in reality, the results of the action of a poison infused into them through the blood, and stirring up its peculiar excitement wherever it found the proper amount of combined irritation and exhaustion to insure it a nidus; just as the typhoid poison awakens its deceptive pseudo-inflammations in the brain, the lungs, the intestines. "Treat these cases," said he, "as idiopathic inflammations, and you must inevitably kill your patients." Most of these cases were treated successfully, by early local derivation or depletion, followed, or even accompanied, by profuse general stimulation. Three, however, terminated fatally; two by suppuration into the pelvic cavity, and purulent absorption, in one of which a large number of abscesses, from the size of a walnut down, were found in the lungs; and one by gangrene of the cervix, extending to the mucous membrane of the body, and involving to a slight extent the posterior walls.

The next point to which Dr. B. called attention, was that the lesions themselves differ materially from those having an inflammatory origin. Prof. Murphy has so clearly pointed out these distinctions that no apology is necessary for quoting them:

"*In peritonitis*, all the arterial capillaries are highly injected: hence the intestines are streaked with bright red lines of capillaries

that encircle them. *In puerperal fever*, the venous capillaries predominate; hence the livid hue of the intestines, and the dusky red color of the patches and streaks on their surface. *In peritonitis*, the lymph which is poured out is adhesive, uniting the different parts like glue: if removed from the surface of the intestine on which it is deposited, the strings of this lymph are broken across, and the surface is rough; the quantity of serum poured out is not great, and, being lodged in the cavity of the pelvis, may at first escape observation. *In puerperal fever*, that which we call lymph is not adhesive: it is much more abundant than adhesive lymph, covering the fundus of the uterus, the intestines, the liver, the diaphragm; it is found also in the pleura; its color varies from a dusky brown to a pale yellow; it may be peeled off the liver, the intestines, or the uterus, quite easily; the surface from which it is taken is smooth, and that of the intestines is a dark red color. The quantity of serum is equally profuse; and this substance being dissolved in it, gives it a lactescent appearance like pus; hence, it is called sero-purulent fluid. Thus, when the abdomen is opened, a large quantity of this fluid always escapes. It will be objected that this sero-purulent fluid is also met with *in peritonitis*. This is perfectly true; but it is necessary to note the stage of the inflammation in which it is observed. I have never met with it unless in the second stage of the attack. When a patient died in the first stage, there was none of it. I conclude, therefore, that in the former instance (the second stage) such effusions only occurred when the constitution was sinking under the attack; but in the latter, when death took place from a different cause, the effusions noticed were the true products of inflammation. *In puerperal fever*, the greater the intensity of the seizure the less the chance of meeting anything like lymph. In the most intense forms no effusion at all may take place. In a degree less intense, a large quantity of serum, colored brown by blood, is found in the peritoneum and throughout the tissues: the lymph poured out is of the same color, having no adhesion to the surface on which it lies, as if the fibrin of disorganized blood had been deposited there. In the next degree, the same kind of lymph or fibrin is found, of a yellow color, with a quantity of sero-purulent fluid. And lastly, in those cases in which the constitution for a time struggles successfully against the fever, some adhesive lymph will be met with, mixed up with a larger quantity of what I have just described."

The next argument which he adduces in proof of the doctrine that puerperal fever is a zymotic disease, and not a local phlegmasia, is that simple inflammatory diseases are not communicable from one patient to another, through the medium of a third party. It may be objected that this argument assumes that puerperal fever is thus communicable, which is not proven, and is one of the points now under discussion. He says, "With all due deference to those present who may differ from me, if any such there be, I must be allowed to say, that I think no one fact in medicine is better established than this. The question of contagion is not one of abstract reasoning, but one of facts; and, as to the facts, a few amounting to positive demonstration, must be conclusive. Negative testimony is utterly

worthless in settling such a question. I should almost feel that I insulted the intelligence of those present by entering into an argument on this point at the present day. Prof. Oliver Wendell Holmes, in his essay on the *Contagiousness of Puerperal Fever*, has brought an array of facts which must, I think, be convincing to every unprejudiced mind. For myself, I would say with Dr. Blundell that, 'I had rather those I esteemed the most should be delivered unaided in a stable, by the manger-side, than that they should receive the best help, in the fairest apartment, but exposed to the vapors of this pitiless disease.' I would heartily concur with the emphatic declaration of Dr. Holmes that, 'if, on this point, there is any voluntary blindness, any interested oversight, any culpable negligence, even in such a matter, and the facts shall reach the public ear, the pestilence carrier of the lying-in chamber must look to God for pardon, for man will never forgive him.' Now, then, if this disease is thus communicable, is there any other local phlegmasia which is thus communicable? It may be objected that dysentery is sometimes contagious; I think I have myself been through an epidemic of dysentery which was evidently contagious; but I should answer, first, that it remains to be proved that this form of dysentery is simply a local phlegmasia; and, second, that there is no evidence that a healthy person can communicate this disease from one person to another.

"My next argument is, that the prophylaxis of puerperal fever is not the prophylaxis of local inflammation. In the large hospital of Vienna, from 1840 to 1846, one in every ten mothers delivered perished, chiefly from puerperal fever. In May, 1847, Dr. Semelweis prevented students from touching parts at the autopsies, and directed all of them to wash their hands in a solution of chlorine before and after every vaginal examination; and the mortality from this time so far diminished that, in 1848, not above one in seventy-four mothers died. Does not this fact prove the toxæmic origin of the disease in these cases; and that the local lesions are secondary, reactive, and have less pathological value than the change which precedes it? It may be objected, that the views which have been advanced as to the pathology of puerperal fever entirely ignore the existence of an epidemic influence; and that, the epidemic influence may give a specific character to the local phlegmasia. From Sydenham we have learned the phrase 'type of the season,' and another phrase has come into use, meaning nearly the same thing, viz., 'epidemic constitution.' Now, what is meant by these terms? Clearly they must refer to certain atmospheric or telluric influences, which modify the susceptibility of the system to disease, or which increase the virulence of the poison which develops disease. That this influence really exists, acting in both ways, I think there can be no doubt. It sometimes produces its influence wholly on the system, diminishing the vital resistance to disease, and rendering inflammatory action asthenic in its type; or the opposite result may be produced. So, also, it may increase the virulence of the poison which gives rise to the zymotic diseases. Puerperal fever is most notably susceptible to an epidemic influence.



"I have thus given my reasons for believing that puerperal fever is an essentiality, that it is a zymotic disease, resulting from the absorption of a specific poison, and that its anatomical lesions are secondary."

There is no specific therapeutics for puerperal fever. The sooner this idea is dismissed from the mind, the more probable is it that the treatment adopted will have a rational and philosophical basis. The method of treatment must vary according to the condition of the system; according to the virulence of the epidemic or special poison; and according to the intensity and severity of its secondary lesions. The indications are: *To eliminate from the system, as much as is possible, the morbid poison.* This is accomplished by means of depletion and the other evacuants. Unfortunately this indication, owing to the peculiar character of this disease, can rarely be fulfilled, except to a limited degree. At the present day, the advocates of venesection are few in number. It proved to be the most efficient remedy in the epidemics met with by Gordon, Hey, Armstrong, and in one seen by Gooch. Venesection should never be resorted to simply because the case is one of puerperal fever, but because the symptoms indicate that depletion is necessary. The same principles should govern us in resorting to purgatives, emetics, diuretics, etc. The second indication is: *To control the vital disturbances resulting from reaction.* These are principally vascular excitement and nervous irritation. We have in the materia medica an agent, lately brought prominently before the profession, which acts specifically as an arterial sedative, without depressing the vital powers. This is *veratrum viride*. Dr. Tully, of New Haven, first brought its medicinal properties to public knowledge. By it the pulse can be brought under voluntary control. Dr. Barker has used it for several years in puerperal fever, and he asserts that in no disease he saw its value more strikingly exhibited. It is an agent which requires care in its use, and in those cases where its full efforts are required, the patient must be kept under careful medical watching and be seen at short intervals. Unfortunate results were never remarked from its use, but very severe temporary depression.

"A case occurred at the hospital at the time of an epidemic, presenting a combination of symptoms, which all familiar with the disease would pronounce truly alarming. By the *verat. virid.*, the pulse was brought down from one hundred and forty to sixty per minute; and it was never permitted to rise above eighty. The quantity administered varied according to the condition of the patient, two, three, or four drops being found sufficient to control the vascular excitement. In many other puerperal cases I have seen equally striking results. I will briefly mention one which I saw in consultation with Dr. Sayre, the tenth day after confinement. She was a primipara, and her convalescence seemed perfectly normal until the sixth day, when she began to exhibit some appearance of mental disturbance. She was especially anxious in regard to her religious condition. Gradually a high state of nervous excitement was developed with insomnia, and when seen by myself she had been decidedly maniacal for more than twenty-four hours. Her respiration was short and



hurried, her pulse very rapid, her countenance anxious and frightened ; she was incessantly talking, and starting with apprehension from the slightest movement in the room. No physical exploration could be obtained, but there were no local symptoms indicating pelvic trouble. She sat up in bed and moved from one part to another with great rapidity. The *verat. virid.* was now given, and by its influence the pulse was brought down below seventy per minute, the respiration became slower, the mind tranquil, and she was enabled to sleep. I am informed by Dr. Sayre that, in the course of a few days, there was developed in the pelvic cavity an extensive abscess, which pointed externally, near the sacrum. Her convalescence was somewhat prolonged, but she eventually recovered."

There is a vast difference in the power of the herb grown at the South, compared with that grown at the North. Seven drops is a large dose of the tincture prepared at the South.

The opium treatment is most successful in "puerperal fever with peritoneal lesion." It is astonishing to see to what extent patients will tolerate opium where the peritoneal lesion predominates ; but it is only in this form of fever that this great tolerance exists. There is one point to which attention must be called, and that is a test whether the action of this drug is proving beneficial or not. If opium be pushed to incipient narcotism, a gradual decrease in the frequency of the respiration results. Now, the opium treatment is acting beneficially, when, in connection with the reduction of the frequency of the respiration, there is a corresponding decrease in the frequency of the pulse ; but if with incipient narcotism the respiration grows slower and slower, without a corresponding decrease in the pulse, the opium treatment is to be abandoned at once. Dr. B. said : "In one case that occurred at Bellevue Hospital some two years since, the opium had been pushed to such an extent that galvanism had been resorted to to make her breathe. When I saw her the respirations were 10 and 11 per minute, while the pulse was above 140 per minute. Seeing this slow respiration with the frequent pulse, I suggested that no more opium should be administered, as I thought its continued use would overwhelm the vital powers. The *veratrum viride* was then given, and in a few hours the pulse came down below 80. This patient eventually recovered. I will state, then, as my conviction, that in that class of cases where the peritoneal lesion predominates, the opium treatment has proved successful to an extent which no other has." In many cases, to control the vital disturbances resulting from reaction, it will be necessary to use a variety of agents to accomplish this end. Venesection, *veratrum viride*, opium in full doses, camphor, etc. Two cases in illustration of this are recorded by Dr. Barker.

*Third.*—To combat the local secondary lesions which may be developed by local depletion, counter-irritation, fomentations, chlorinated injections, etc. Another indication is, to sustain the vital powers of the system ; in other words, keep the patient alive. There is a certain class of cases where the system seems to be overwhelmed, and yet life will be preserved by the heroic use of stimulant and good nutrition. Many patients no doubt are permitted to die from the neglect

of these resources. After a patient has lived for forty-eight hours, there is constant encouragement for effort, and that the danger is, in a certain sense, diminished in proportion to the duration of the disease.

Dr. CLARK said he had expressed his concurrence in the views of those who believe the disease to be contagious ; in his belief the disease is composed of two elements—a fever and an inflammation. In this respect it resembles the epidemic dysentery, the epidemic erysipelas, or small pox. In the epidemic erysipelas which prevailed in New England and in the Western States, from seventeen to ten years ago, these two elements were as clearly distinct, in the time of their development, as they are in small pox.—a febrile movement preceded the grave inflammatory lesion. This same erysipelatous disease assumed, in lying-in women and those in the puerperal state, the form of puerperal fever. He believed that the puerperal disease is never fatal but by the aid of its inflammatory element. He believed that the cases reported without lesion of any kind were no exception to the general rule, and that they were really marked by inflammation, but that the inflammation was one that had escaped detection ; that it was an endometritis, and that the inflammation affecting the inner surface of the uterus involved the open or valvular mouths of the uterine veins, and might produce purulent contamination of the system, while no pus was found in the veins themselves after death. The evidence of this was in the inflammatory exudation on the inside surface of the uterus ; the redness of the uterine structure, penetrating a minute distance from within outward ; the symptoms of pyæmia and the discovery of pus in distant organs. In objection to Dr. Barker's remark, that the most malignant forms of puerperal fever were void of any local lesions, Dr. Clark reports a number of cases of very short duration (from 33 to 48 hours) having occurred in Bellevue Hospital in 1840. In all these *short* cases there was evidence of inflammatory lesion of the peritoneum ; in all but one there was a morbid exudation on the inner surface of the uterus, and in this one the inner surface of the organ had not been particularly inspected by those who made the dissection.

From the researches of Dr. Sedillot, it appears that injection of serum of ill-conditioned pus into the veins of dogs, was followed by rapid death, without any formation of metastatic abscesses. The import of these experiments, and their relation to the disease in question, is evident, especially when, it is remembered that the uterine cavity is open to the ready access of air ; that when inflammation has been recognized on its inner surface, it has often been of a character most likely to furnish a septic agent ; and that the veins of the uterus are, after parturition, so arranged as to receive such septic agent, healthy or degenerated pus, in an augmenting, and, consequently, accumulative stream. Dr. Clark, after giving the history of opium treatment in ordinary peritonitis, remarks, that the confidence in the opium treatment of puerperal fever, with peritoneal complication, is in no degree shaken by accumulating experience, but is rather increased ; while its usefulness in that form of the disease which is attended by purulent infection, has not been demon-

strated, at least as an exclusive method. With regard to the mode of administering opium, Dr. Clark refers to a letter written in 1829, by Dr. F. G. King, and directed to Dr. V. Mott, in which the dose mentioned is from 70 to 100 drops of laudanum, given repeatedly at short intervals, till the full influence of the drug is developed.

With regard to treatment, Dr. BARKER said: "The value of *veratrum viride* in reducing vascular excitement has in this disease been confirmed by many observers in this city and my own additional experience. It will most surely reduce the quickened pulse of inflammation and irritation. Its use is not incompatible with that of stimulants. Experience has abundantly demonstrated the truth of this apparent paradox. One patient who recovered took, every hour for two days, one ounce of brandy and from three to ten drops of the tinc. *veratrum viride*, the quantity of the latter being determined by the frequency of the pulse, which was never allowed to rise above 80 per minute, although it sometimes fell down to 40. In another case the *veratrum viride* did not seem to produce any effect on the pulse, which remained steadily above 130, until the condition of the patient was such that I decided to give brandy. After the first ounce was given, it fell to 108; after the second, to 86. Continuing the brandy, the *veratrum viride* was suspended for a few hours, and the pulse again rose to 130. After this it was curious to note the fact, that if either agent was suspended the pulse would rapidly increase in frequency, while under the combined influence of the two it was kept below 80 per minute. I have little to add to what has already been said on the use of opium in puerperal fever. In all cases it should be given to the extent of entirely subduing the pain. When the peritoneal lesion predominates, it is the principal agent on which we must rely, and the quantity in which it is to be administered is only to be determined by the effect which it produces.

"To combat the local secondary lesions, a great variety of means have been proposed, which will often tax the resources of the medical attendant to the utmost. I have already spoken of the value of opium in the peritoneal lesion. The tympanitis is often the most striking and distressing symptom, and I regret to say that I know of no treatment by which we can always be sure of relieving it. I rely, however, mostly on the use of turpentine, internally and externally. In some cases I have seen good results from the use of the acetate of lead, and in others I have seen all means fail. In those cases where the secondary lesions are developed in the uterus, its veins, or its lymphatics, I have seen no advantage from leeching or blistering. The exposure of the abdomen to the air more than counterbalances the problematical advantages resulting from the former, while the latter only adds to the nervous irritation already existing. In these cases, the only local treatment I make use of is chlorinated vaginal injections, repeated several times a day, and hot linseed meal poultices kept constantly applied over the hypogastrium.

"Finally, the vital powers of the system must be sustained. I believe more patients die from the neglect of this point than from any other error of treatment in this disease. The patient is often sacrificed by a contest between the doctor and the disease, both con-

tributing to exhaust the vital powers. In very many cases remedies are utterly powerless in combating the disease, and the province of the physician is to keep the patient alive until the disease is exhausted. This can only be done by proper nutrition, and the prevention of waste and the restoration of nerve power by the use of alcoholic stimulants. I will not enlarge upon this point; but I still believe that when a patient with puerperal fever has lived for forty-eight hours, there is constant encouragement for effort, and that the danger is in a certain sense diminished in proportion to the duration of the disease. I will only allude to two points of practice which seem to me of some importance. The first I have already mentioned, the value of a mercurial laxative when the patient has been supported for some days by the liberal use of beef-tea and alcoholic stimulants until the stomach loses the power of taking care of what is put into it, apparently from obstruction of the portal circulation and congestion of the capillary circulation of the mucous membrane of the alimentary canal.

"There is another class of cases where the stomach seems to give out all at once from another cause which I will not undertake to explain. Everything is rejected in a few minutes after it is swallowed, with a painful feeling of burning and excoriation. Now, if this condition is not changed the patient will soon die, as she can no longer be sustained. I have in several instances been able to persuade the stomach to resume its functions by adding to each table-spoonful of beef-tea one drop of nitro-muriatic acid, the proportion of the mixture being one part of the nitric and two of the hydrochloric acid."

DR. AUBER's work contains a critical review of the discussion in the Paris Academy of Medicine, and is intended to prove the existence: 1st, of a peculiar puerperal state with consecutive, specific, puerperal phenomena; 2d, of a real (*légitime*) puerperal fever, originating from the absorption of the lochia and milk; 3d, of an epidemic puerperal fever; and 4th, of a puerperal typhus, being an occasional result of putrid miasmas, developed in rooms overcrowded with women in childbed.

DR. TARNIER's book on puerperal fever is one of the most important articles on this subject, written in France. He first treats of the pathological anatomy, based upon a large number of post-mortem examinations. He found the blood changed in all cases examined; the alterations were those indicated by Dr. Vogel. In speaking of uterine phlebitis, he says that according to his experience the so-called metastatic abscesses were only exceptional coincidences with phlebitis. Virchow is of a different opinion, and very likely Dr. T. has taken cases of lymphangitis for phlebitis. By a microscopical examination the puriform liquid in the fallopian tubes was found to be of a two-fold nature, one consisting of regular pus globules, one of a transparent liquid with an abundant quantity of epithelial cells. The liver is very often found in a state of fatty degeneration, which is due not to puerperal fever, but to the physiological condition of the puerperal state. The importance of symptoms with regard to the hard string, representing the inflamed fallopian tubes, and which Behier considers as an unfailing sign of approaching puer-

peral fever, is admitted, still he does not consider this lesion as a prodrome, and much less as the first period of the fever. The first chill was never remarked as far as eight days after delivery ; as a general rule it sets in immediately after confinement. In genuine puerperal fever there is only one or two initial chills, while its frequent repetition is rather an indication of purulent or putrid infection.

#### COURSE, DURATION.

Out of a number of 67 cases—

Died in 38 hours.....	1
" 39 ".....	1
" 2 days.....	4
" 3 ".....	9
" 4 ".....	19
" 5 ".....	15
" 6 ".....	10
" 7 ".....	5
" 8 ".....	1
" 9 ".....	2
" 10 " or more.....	0

In the epidemic of 1856, which lasted from the beginning of April to May 10th, when the Maternité was closed, 64 women died of puerperal fever, during which time 347 women were delivered. The hospital was reopened on June 21st, and during the month of September another epidemic began to rage, so that 27 deaths were recorded out of 266 confinements. At the end of October the disease had entirely disappeared.

*Etiology.*—With regard to the influence of the season upon the origin of the fever, Dr. Lasserre has reported the distribution of the disease during 12 years. He found

3 epidemics.....	in January.
5 ".....	" February.
3 ".....	" March.
1 ".....	" April.
1 ".....	" June.
3 ".....	" July.
2 ".....	" August.
1 ".....	" October.
1 ".....	" November.
3 ".....	" December.

In the same space of time, the six cold months furnished 868 deaths of 18,108 confinements; the six warm months 465 deaths of 15,956 confinements.

After Dr. Lasserre's and Dr. Tarnier's researches, it appears that the mortality is less among women who have been living for some time inside the hospital walls, while those who entered shortly before delivery are much more severely taken with the disease, and so are the primiparous women. The generally adopted view that a dead foetus in the uterus had an influence upon the development of the disease, has been refuted by Dr. Dubois. Out of 89 still-born children in 1856, 6 only were born of women who afterwards died of puerperal fever.

In discussing the question of contagion, Dr. Tarnier does not hesitate to pronounce in the affirmative. During 1856 there were

At the Maternité—2,237 confinements and 132 deaths.

At the Clinique— 630 confinements and 51 deaths.

During the closure of these hospitals, a portion of the pregnant women were received at the hôpital Cochin, and soon the same mortality was established, viz.: 16 deaths out of 206 confinements, while in the city only 14 deaths were noted down out of 3,222 women. The author himself had occasion to treat one of the nurses in the Maternité during her monthly courses, for a disease which resembled exactly puerperal fever. She died in three days, and the peritoneum was found to contain a large quantity of purulent serum; the womb appeared perfectly healthy. Another nurse was taken, while she had her courses, with similar and very alarming symptoms, but she finally recovered. A similar fact has been reported by Dr. Depaul (*Union Médicale*, 1855, No. 26), and Drs. Dubois, Danyau, Voillemier have seen the same. Moreover, at the time when the disease was at its height an unusually large number of new-born children died, viz.: 78 out of 302; this was from April 1st to May 10th, a percentage four times larger than that of the entire year; and most of the children who died, were born from mothers not taken with the fever. The question whether a physician is liable to propagate the fever personally, from one person to another, Dr. Tarnier is inclined to answer in the affirmative. To prove this he alludes to the many observations brought forward in the discussion of the Paris Academy of Medicine, by Drs. Danyau and Dubois; he says: "If puerperal fever was only an epidemic disease, it would spread with an equal force outside as well as inside the hospitals, but it has been demonstrated that this is not the case. The puerperal poison does not only infect women in the puerperal state, but also non-pregnant, quite young women, and new-born children."

As a prophylactic remedy, Dr. Tarnier proposes to have the hospitals constructed so that only one woman is received in a room during confinement, to remain there for fourteen days; this room to be well aired and cleaned afterwards, and left unoccupied for 14 more days. Moreover, the pregnant women ought to be received in the hospital at least 14 days before delivery, in order to get acclimatized to the hospital air, experience having shown, that women received shortly before their confinement are more prone to catch the fever than those who have been there for a greater length of time. With regard to treatment Dr. Tarnier is in favor of administering an emetico-cathartic, in those cases where bilious symptoms are present. The use of mercury he thinks, is of no avail, as he himself has never succeeded in producing salivation. In epidemics of a very serious character, the administration of quinine has had not the least influence. Dr. Delpéch has applied the bichromate of potash, and two very bad cases were cured. Still the remedy has been tried too little to allow of a final decision.

As to the nature of the disease, two principal objections can be raised against those who advocate its local genesis. First, it is im-

possible during a well-marked epidemic to make a distinction between puerperal peritonitis, pleuritis, phlebitis, or lymphangitis, while on the other hand a great number of observations are known where the most scrupulous examination was at a loss to detect the slightest trace of local disease. The epidemic and contagious character of puerperal fever, are a sufficient proof that it is a general and not a local disease. Dr. Tarnier remarks that, metro-peritonitis, uterine phlebitis and angioleucitis, purulent and putrid infection, are accidents to which puerperal women are at times subjected ; but in this case they represent peculiar diseases for themselves, which can be distinguished from puerperal fever. The puerperal fever, according to Dr. Tarnier, is due to a poison, a morbid fermentation, which may take its origin spontaneously in the organism, under the influence of certain unknown conditions, which at times forms or enters into the system by an epidemic influence, which at times is propagated from one woman to another, by the different modes of contagion. The diseases which puerperal fever resembles in many points, are the epizootic pneumonia and army-typhus. The thesis is concluded by a number of very interesting observations.

DR. MURPHY considers puerperal fever as the consequence of a poison, affecting the blood, which has a disposition to exudations from the serous membranes. The fibrin of the blood already present in a larger proportion, is altered in its chemical constitution ; hence, the profuse exudations of a diseased fibrin. It is not adhesive, but decays in a pultaceous mass ; the veins are filled with dissolved, purulent fibrin. The poison proper to puerperal fever seems to have an opposite effect to that of typhus fever ; the former increases, the latter diminishes the quantity of fibrin. The character of the disease is modified by the quantity of poison received in the organism. With regard to treatment, it must be remarked, that the use of ipecacuanha saved many patients in some epidemics. Dr. M. proposes to try chloroform as a specific remedy against the disease, with a view to destroy the poisoning element in the blood.

DR. PIDOUX remarks that puerperal fever comprises a series of affections of a varying form and localization, the climax of which was represented in the puerperal typhus. This typhus is almost exclusively observed in overcrowded wards, and the only reliable treatment for it is a thorough alteration in the construction of the lying-in hospitals.

DR. SIMPSON advocates the possibility of transmission of puerperal fever from one person to another by the attending physician, and even believes that a typhus patient can produce puerperal fever in a puerperal woman by his exhalations.

DR. BEHIER, a pupil of Trousseau, considers phlebitis and purulent absorption as the principal cause of puerperal fever. It is no disease peculiar to women in childbed, but has been observed in persons being neither pregnant nor in the puerperal state.

DR. SURMAY believes that the extensive production of pus in puerperal fever, was owing to a general suppurative or inflammatory disposition. The pathological condition produced by this profuse suppuration does not produce a specific disease, but only a peculiar



form of disease, which is the representation of the general inflammatory state.

DR. BROCHIN defends M. Bouillaud's theories, who does not believe in a specific puerperal fever. The fever is of an inflammatory or of a typhoid nature, which depends from its sporadic or epidemic character. With regard to treatment, Dr. B. insists upon checking the progress of the disease by early attendance, and proposes to have the actual state of our lying-in hospitals thoroughly altered.

DR. CROS advocates the use of calomel and mercurial ointment for the treatment of puerperal fever; 120 or 140 grmm. to be applied for the space of three days.

DR. LEGROUX is essentialist, inasmuch as he recognizes an unknown general cause, which invades the organism, and thus produces the disease. This cause shows a different intensity, and a changing character in the different epidemics. The presence of the puerperal state is indispensable for this cause, to develop its effect upon the system. Besides this epidemic influence, colds or other injuries are apt to produce severe puerperal diseases, in which case the purulent or putrid infection takes the place of the epidemic influence. Both sporadic and epidemic puerperal fever present a series of symptoms different in one and in the other instance, while they assume the same character, and exhibit the same anatomical lesion at a more advanced state. The disease becomes contagious under certain conditions, but this is not a characteristic symptom of the fever. The treatment has to be adapted to, and modified after the peculiarities proper to every single case. As soon as a violent chill appears, first of all an emetic has to be administered, in order to produce sweat, contraction of the womb, and a retardation of the pulse. If, after this the fever continues, quinine ought to be given in large doses.

The epidemic alluded to by *Prof. Virchow*, extended from the fall of 1856 up to February, 1858, making eighteen months altogether. The fever was at its height in both winters, confirming a fact mentioned already in 1847 by Dr. V., that the disease is more prevalent in winter than at any other season, thus contrasting with the so-called traumatic fever, which is more prevalent in summer time. In almost every case, the post-mortem discovered some localized affection. One of the most surprising features, was the frequent presence of recent endocarditis, with undoubted symptoms of puerperal fever during life. The affection, in most cases, had involved the mitral valve. In some of these it could be stated, that particles from the diseased valve had been removed, swept away with the current of blood, and deposited in distant localities, thus obstructing capillaries, and causing local inflammations, phenomena which hitherto have always been called metastatic and pyæmic deposits. The particles from the mitral were recognized in these embolic deposits by treatment with a solution of caustic potassa, by which fresh fibrinous concretions are partially dissolved, while the fragments from the heart underwent no change. In these cases, the uterus was found perfectly healthy, and the symptoms of puerperal fever started exclusively from this affection of the heart. The author met with four cases of this kind, in one of which the sudden death was caused by a



malacia of the entire heart. He therefore considers this endocarditis of a puerperal character, and thinks the condition of the heart ought to be more generally considered in cases of so-called metastatic affections, especially if the state of the abdomen does not sufficiently explain either the violence of the disease, or the frequency of the pulse.

At the time when the epidemic was at its hight, most of the cases were of a peritoneal character, among which the greatest number was free from metastases. The nature of this peritoneal inflammation showed two distinct forms; one was a mere superficial peritonitis with partly plastic, partly purulent exudation; the other, more dangerous, was of a diphtheritic character, the effusion of which spread to the deeper layers of cellular tissue, which afterwards degenerated, thus presenting a mixture of detritus and pus. This is the same diphtheritic process, which, in so many instances, seizes the inner portion of the womb.

In one case the uterus itself was the seat of inflammation, which resulted in gangrene. Of more common occurrence was ovaritis, representing also two different forms, viz., a superficial inflammation, resulting in abscess of one or more follicles, which, by rupturing, gave rise to violent peritonitis; or a diffuse inflammation of the parenchyma, leading to considerable enlargement and malacia of the ovary.

At other times, phlebitis prevailed, generally connected with metastases, which find a natural explanation, if considered as embolias. Inflammation of the lymphatics was scarcely ever followed by metastases, which finds its natural explanation in the fact that the greater number of lymphatics take their course through the lymphatic glands, in which larger particles may be retained, and may produce lymphangitis, but not vascular thrombosis. These latter affections are generally connected with rupture of the perineum or vagina, or lacerations of the cervix uteri, and are often complicated with gangrenous destructions of the cellular tissue in the pelvis and fossa iliaca.

DR. LEHMANN'S article is a report on puerperal fever representing the views of the Obstetric Society of Amsterdam. It appears that the physicians of Holland consider puerperal fever as a primitive disease of the blood, produced by the influence of a miasma, which secondarily affects different local diseases. Both fever and local lesions have one common source, viz., the primary alteration of the blood. In some epidemics the fever prevails, in others the inflammations. The alteration of the blood may be primary, *i. e.*, originate in the blood itself, or secondary, by resorption of septic particles. With regard to prophylactic treatment, the secale takes the first place in those very numerous cases where the uterus had not been sufficiently contracted after every labor of considerable duration, and whenever the afterpains are unusually strong, morphia ought to be administered. In no disease the "principus obsta" must be more strictly observed. The general treatment consists of febrifuges (quinine, digitalis, aconite), antizymotic (mercury, nitrate of silver, arsenic), and antipyæmic remedies (chlor., kreosot, mineral acids); the local treatment embraces poultices, bleeding, opium enemata, and vaginal injections.

DR. O'REILLY's article is intended to reconcile the diverging ideas on puerperal fever, by identifying it with erysipelas.

From an analysis of PROF. PELLIZARI's lectures, it appears that he considers puerperal fever to be essentially nothing but a purulent infection. Professors Vannoni and Buffanini, seem to be of the same opinion. The different forms of the disease are explained by the different locality from which the infection takes place, and the different quality of pus introduced into the system. Moreover, the different constitutions of the women taken, impress a different character upon the course of the disease.

As predisposing causes, thirteen conditions are considered, which may favor purulent absorption. Among these, absorptions of pus by the fallopian tubes, and its promotion through this channel from the uterus to the peritoneal cavity, seems to be Dr. Pellizari's favored idea, believing that puerperal peritonitis was in most of cases a secondary stage of local disease.

The work of DR. BRAUN on uræmic convulsions is divided into ten chapters, of which the first two are devoted to an account of the symptoms and pathogeny. Eclampsia puerperalis is defined to be an acute affection of the motor function of the nervous system, characterized by insensibility, tonic and clonic spasms, and occurs only as an accessory phenomenon of another disease, generally of Bright's disease in an acute form, which under certain circumstances, spreading its toxæmic effects on the nutrition of the brain and whole nervous system, produces those fearful accidents. The eclampsia gravidarum, according to Dr. Braun, is commonly due to that form of blood-poisoning which results from the retention and decomposition of urea in the blood, or the retention of the excremental, extractive matter of the urine. Another form of eclampsia, presenting somewhat different symptoms results from the defective elimination of carbonic acid, bile, and other matters which in a state of health are freely and constantly separated from the blood. There is also a phlegmasial variety of eclampsia, known as the cerebral or apoplectic, and originating from meningitis, encephalitis intermeningeal apoplexy, thrombosis of the longitudinal sinuses, and hyperæmia of the brain, spinal cord or medulla oblongata. Eclamptic attacks are sometimes very closely simulated by hysterical convulsions. Sudden death from hemorrhage is often accompanied with eclamptic phenomena. Conditions similar to eclampsia are occasionally produced by mineral, animal, and vegetable poisons, and the inhalation of carbonic acid, and carbonic oxide gases. Dr. Braun, after analyzing the numerous views entertained as to the cause of eclampsia, arrives at the conclusion that the eclamptic convulsions of women during pregnancy must be considered to be identical with the fits of adults in general, that are produced by uræmia in the course of acute Bright's disease. This doctrine, which he regards as "an axiom in theory as well as in practice," he announced in 1851, about the same time that Frerichs published his well known essay on this subject. But from this confession of Dr. Braun it would be wrong to deduct, that he considered Bright's disease as the only cause of genuine eclampsia. When speaking of the different forms of eclampsia he himself acknowl-

edges a phlegmasic, cerebral or apoplectic variety. All he endeavors to prove is the frequent connection of eclampsia with Bright's disease of the kidneys. Concerning the concomitant œdema, he says : Only those œdemata of pregnant women which exist contemporaneously with albumen, fibrin cylindres, and fatty degenerated scales of Bellini's epithelium in the urine, have a connection with uræmic eclampsia. The œdema of the lower extremities, ascites and hy-dramnios, which are not complicated with albuminous urine containing fibrin cylindres, are not followed by uræmic eclampsia in pregnancy or labor. The affection of the kidneys with disease cannot with certainty be inferred from the appearance of dropsy, as distinct causes may, at the same time, or one after the other, produce dropsies. With regard to the cause of uræmic convulsions Dr. Braun adopts the theory of Frerichs, who attributes uræmic intoxication not to urea but to the presence of carbonate of ammonia in the blood, which he supposes to be formed from the urea by the action of some ferment. He assures to have detected this salt in the blood, and exhalations in all cases in which the symptoms of uræmia were developed. The researches of eminent writers upon this subject, such as Litzmann, have shown sufficiently that carbonate ammonia is not absolutely necessary for starting uræmic convulsions. Very recently Dr. Hammond, Assistant Surgeon U. S. Army, in his article "on the injection of urea and other substances into the blood" (*The North American Med.-Chir. Review*, Vol. I, No. 2, March, 1858), has undertaken some experiments, which are decidedly opposed to the views advanced by Frerichs. From these experiments he concludes : 1. That urea (simple and combined with vesical mucus), carbonate of ammonia, and sulphate of potash, when injected into the blood-vessels of sound animals, do not cause death. 2. That nitrate of potash, when thus introduced, is speedily fatal. 3. That death ensues from the injection of any of the foregoing substances into the circulation of animals whose kidneys have been previously extirpated. 4. That in neither case does urea, when introduced directly into the circulation, undergo conversion into carbonate of ammonia. Judging from these experiments, Dr. Hammond thinks that Frerichs's theory of uræmic intoxication is erroneous. In neither of the cases in which urea was injected into the circulation was any ammonia detected in the breath, or vomited matters. Without pretending to question the accuracy of Frerichs's statement, he is of the opinion that the presence of carbonate of ammonia was accidental. It thus appears, from these conflicting statements, that the pathogenesis of this important disease is yet far from being satisfactorily established. The third and fourth chapters of the work before us treat of the connection of labor-pains with eclampsia, and the influence of the latter upon the life of the fœtus. Dr. Braun thinks that the pains should be regarded as the effect rather than the cause of eclampsia ; and he asserts positively that fits cannot be produced at will, nor even aggravated by exciting pains and increasing their strength. The great danger to the life of the fœtus our author refers chiefly to the presence of carbonate of ammonia in the fœtal blood. Chapters five and six are taken up with the consideration of the etiology and path-

ological anatomy of uræmic eclampsia. The following chapters treat of diagnosis, prognosis, and treatment of eclampsia and Bright's disease. Altogether, Dr. Braun's work will fully repay an attentive perusal. We conclude this short analysis by quoting the words of the reviewer of the *North American Medico-Chirurgical Review*: "Upon the whole, this work is the most complete and erudite essay upon the subject of which it treats, that we are acquainted with, and we only regret that our limited space prevents us from more fully laying before our readers the peculiar views of its author."

Dr. PIRRIE'S paper, read before the Belfast Medical Society, is essentially nothing but a reproduction and endorsement of Dr. Braun's views on puerperal convulsions.

Dr. ISHAM'S article on puerperal convulsions is one of the most scientific and instructive articles we have met with. It discusses the influence of diseases of the kidneys upon the production of eclampsia in a way which clearly shows that the author is well acquainted with the latest progress in science. Added are some new and important observations.

In a paper read before the Berlin Obstetric Society, Dr. LITZMANN expresses his opinion that future times would establish the fact that eclampsia ought to be considered as a symptom of uræmia with very few exceptions. Still, eclampsia is not the only form of uræmic intoxication. Other symptoms of this affection are, amaurosis, coma, mania and typhoid fever. The most general cause of uræmia in cases of this kind is Bright's disease of the kidneys, *i. e.*, an exudation of an albuminous and fibrinous fluid into the urinary ducts, in consequence of which the excretion of urea and other ingredients of urine is checked. It most commonly takes its origin during the latter months of pregnancy, owing to a stasis of the venous blood in the kidneys. The urine taken from women thus affected shows a considerable decrease of urea, and very often of lithic acid. It often happens that the progress of the disease, as detected by the microscope, does not correspond with the symptoms during life, and the reaction of the system seems to depend more upon the extension than upon the intensity of the affection. If a considerable portion of both kidneys is affected with the first stage of the disease, the effect upon the constitution of the blood is greater than if a smaller portion is in a more advanced stage. In the former instance, the excretion of urea must be more restricted than in the latter one. This is exemplified by the history of a case, where, with a seemingly far advanced degeneration of the kidneys, the excretion of urea was not diminished, and, consequently, no uræmic symptoms occurred.

The second case reported was one of congestion of the kidneys, in which severe uræmic symptoms set in, while only very slight traces of albumen could be detected in the urine. But a chemical analysis proved a considerable decrease of urea during the several attacks; and when the patient began to recover, a larger quantity of urea could be detected in the urine. The child which was born with a cyanotic tint, died twelve hours after birth. A chemical analysis proved the presence of a considerable quantity of urea in his blood.

Dr. PESCH gives the history of a case of eclampsia, from which he

concludes that venesection is not useful in all cases of puerperal convulsions ; in this instance at least blood-letting seemed to do more harm than good, as it was followed not only by a severe collapse, but also by an increased intensity of the single fits. Moreover, the artificial termination of delivery seemed to have not the least influence towards checking the convulsions. Dr. P. proposes the internal use of chloroform in similar cases, as its application in this instance was doubtless of great benefit.

The case of Dr. WEGSCHEIDER is interesting, inasmuch as it goes to show that the convulsions may set in independently of labor-pains—a fact often disbelieved, and by eminent authors (Kiwisch). In this instance labor-pains were observed only 48 hours after the first convulsions ; they lasted for six hours, during which time not one fit was observed.

Dr. PAGET reports a case of eclampsia, in which the accouchement forcé was successfully performed ; as soon as the child was born, the eclamptic attacks ceased spontaneously. The author is in favor of early operation in cases of puerperal convulsions.

Dr. CARVILLE reports the case of a woman who was taken with eclamptic attacks in the fifth month of pregnancy. The patient was bled repeatedly for four days, when she began to recover. On the fifth day a dead foetus was born. Although the legs were remarkably œdematous and the urine albuminous, Dr. C. does not believe that this was a case of Bright's disease, but he attributes it to some unknown occasional influence in connection with the peculiar condition of the blood of pregnant women, overtaxed, as it is, with fibrin.—Fibrin is just now, with our French brethren, the *materia peccans* for anything that happens to a pregnant woman.—E. N.

In the cases of puerperal convulsions communicated by Dr. DALE, the women had considerable serous effusion into the cellular tissue, and in the fatal one, as proved by the post-mortem, into all the visceral cavities. In these cases, therefore, it is probable that the convulsions were produced by the united operation of effusion at the base of the brain and the poisoned state of the blood. As regards the treatment adopted, the author thinks that bleeding saved the lives of the two patients who recovered. In the fatal case the patient ought to have been bled more freely ; and it is probable she also would have been saved if the feeble pulse (perhaps masked by the œdema) had been disregarded.

Dr. WELLINGTON reports seven cases of puerperal convulsions, and remarks, that of all the remedies used—venesection, leeches, cathartics, anti-spasmodics, rubefacients, etc.—the inhalation of chloroform or ether seemed the most efficacious. In two cases it controlled the convulsions, while in the others Dr. W. thinks it did good.

Dr. CHAPMAN gives a few statistics from English books, and proceeds to report nine cases of eclampsia of his own. In reading all his remarks on the disease in question, we are impressed with the antediluvian character of this article. Not a word is mentioned of the great discoveries of our times. The author seems to be perfectly ignorant of the connection of morbus Brightii and eclampsia. He rejects the use of chloroform in eclampsia, because the two cases in

which chloroform was given, died. In one of these cases (5) it was administered at a time when the case had advanced to such a hopeless condition, that Dr. Chapman had to "call in" a third doctor "to help him out." The other case (9) seems to have nothing at all to do with eclampsia. We recommend Dr. C. to read Dr. Braun's treatise on *eclampsia parturientium*.

Dr. MOREAU recommends the use of elastic stockings (Bourgeaurd's) in cases of *phlegmasia alba dolens*. He has tried and found them very useful in a considerable number of cases. They are preferable to the common roller-dressing, because the pressure, thus performed, is less energetic and still more efficient.

Dr. ARTHILL reports a case of mania in a lately confined woman, where very large doses of morphia failed to produce sleep or rest. He therefore chloroformed the patient, and placed a grain of muriate of morphia on her tongue, continued the inhalation of chloroform for half an hour, and then gradually withdrew it. By this management the desired effect was procured, she continued to sleep and recovered her senses perfectly.

Dr. LEBERT has already directed attention to a form of chlorosis, peculiar to women in child-bed. He reports another interesting case of death from this cause, where no anatomical lesions whatever could be detected post-mortem.

The object of Dr. COULSON's article on secondary affections of the joints in puerperal women, is to show that this disease is connected with pyæmia. In the large majority of cases, purulent phlebitis of the parts originally affected has been observed after death. This holds good especially for cases which occur in connection with puerperal fever. The careful observations of M. Tonellé, at the Lying-in-Hospital in Paris, place the fact beyond doubt, and show that, although these secondary joint-affections, and the general symptoms which accompany them, never take place without having been preceded by primary suppuration, purulent phlebitis, and primary sup-puration of the cellular tissue do not necessarily give rise to them. The pus-poisoning and secondary deposits are an occasional, but not a constant effect of the phlebitis and primary abscesses. Thus in two hundred and twenty-two post-mortem examinations of patients who died from puerperal fever, M. Tonellé found suppuration of the veins or lymphatics of the uterus in one hundred and thirty-four cases; yet of these, ten cases only furnished examples of secondary articular disease. In many cases where pus has not been found in the uterine veins or lymphatics, it has been found in other tissues; and the very few cases related where no pus was found, show either that the post-mortem examinations were imperfectly conducted, or that the temporary secretion of pus might have been fairly inferred from the symptoms during life. The presence of vitiated and putrid secretions in the uterus does not account for the disease. It is not produced by retention of the placenta after abortion. It does not occur (unless phlebitis exists) in the form of puerperal fever, which is characterized by putrescence and softening of the uterus. It is not produced by the ingestion of putrid animal substances into the stomach. The disease occasionally occurs in females without any of

the accompanying circumstances of the puerperal state. Yet in its course, symptoms, and termination, it does not differ from the form which occasionally accompanies puerperal fever; the only modifications being those which arise from the presence or absence of the puerperal fever itself. The author does not deny the pernicious influence of vitiated secretions, while he maintains that all observation and analogy establish the doctrine, that, unless these secretions excite purulent phlebitis, or give rise to primary deposits of pus in some of the tissues, they are not followed by the train of symptoms known under the name of pyæmia.

## X. APPENDAGES OF THE FŒTUS, EXTRA-UTERINE AND MULTIPLE PREGNANCY.

1. Duhamel, Robin and Mattei, on *Hydrops of the Chorial Tufts*.—Gaz. des Hôp. 71; 84.
2. McCaw, J. B., a *Case of Uterine Hydatids*.—Virginia Jour. XI. 5. November.
3. Maurice, on a *Case of Uterine Hydatids*. Saint Etienne: Thealier, aîné. 8. pp. 10. 1858.
4. Mayer, *Removal of a Mole from the Uterus by Injections of Warm Water*.—Würtemb. Corr. Bl. 16.
5. Read, W., on the *Influence of the Placenta upon the Development of the Uterus during Pregnancy*.—Americ. Jour. April.—New York Jour. Nov.
6. *The Physiology and Treatment of Placenta Prævia*. By R. Barnes, M.D. London, Churchill. 8. pp. 220.
7. Lee, R., *Clinical Reports of Twenty-one Cases of Uterine Hæmorrhage from Placental Presentation*.—Med. Tim. and Gaz. 426. Aug. 28.
8. Curray, R. O., *Case of Placenta Prævia, etc.* Nashville Recorder. I. 1. Sept.
9. Grant, J. H., a *Case of Placenta Prævia*.—Charleston Jour. March.
10. Spiegelberg, O., *Cases of Placenta Prævia*.—Mon.-Schrift f. Geburtsk. Feb.
11. Byrne, E. D., a *Case of Placenta Prævia*.—Med. Tim. and Gaz. May, 22.
12. Rhoads, a *Case of Placenta Prævia*.—Americ. Jour. April.
13. Marshall Weir, *Report of a Case of Placenta Prævia, in which Turning was Successfully Resorted to in Extreme Exhaustion*.—Lancet. II. 4. Oct.
14. Garland, E. C., *Report of a Case of Placenta Prævia, in which Turning was Successfully Resorted to, Chloroform Given with Advantage, and the Child Resuscitated by the "Ready Method"*.—Lancet. II. 5. Nov.



15. *Removal of the Placenta in the Early Months of Pregnancy, by Evulsion.* (Discussion of the Obstetric Section of the New York Academy of Medicine).—Amer. Monthly. X. 4. Oct.
16. Gibb, O. C., *Removal of the Placenta in the Early Months of Pregnancy by Evulsion.*—Ibid. X. 6. Dec.
17. Dubois, P., *on Morbid Adherence of the Placenta.*—Gaz. des Hôp. 65.
18. Vullyamez, *Application of the Forceps, Retention and Adherence of the Placenta.*—Powerful injections of Water Successfully Applied.—Ibid. May, 20.
19. Geoffray (de Montreuil), *on Injections of Cold Water into the Veins of the Cord in Cases of Adherent Placenta.*—Ibid. 76.
20. Smith, J. D., *Adherent Placenta; the Use of Chloroform.*—Oglethorpe Jour. I. 4. Oct.
21. Hancox, H., *on Adhesion of the Placenta.*—Brit. Jour. July 17.
22. Jones, J. W., *on Adhesion of the Placenta.*—Atlanta Jour. March.
23. Houel, *on Adhesion of the Placenta and Membranes with Portions of the Fœtus.*—Gaz. de Paris. 3.
24. Perroud, *a Fœtus with Double Placenta.*—Gaz. de Lyon, 15.
25. Logan, A., of Leavenworth Cy., Kansas, *Case of Abortion at five Months, with a Remarkable Disposition of the Placenta, and the Membranes of the Ovum; with Some Remarks thereon.*—Cincinnati Observer. I. 9. Sept.
26. Thomas, Gaillard T., *on Prolapsus of the Funis.* (Paper read before the New York Academy of Medicine).—New York Jour. of Med. IV. 2. March.
27. Mendenhall, G., *a Case of Prolapsus of the Umbilical Cord, Complicating Labor.*—Cincinnati Observer. I. 10. Oct.
28. Harris, R. P., *Case of Fallopian Pregnancy, Resulting in Rupture of the Cyst and Terminating in Death.*—Americ. Jour. LXIX. January.
29. Johnston, Cr., *Case of Extra-uterine Pregnancy; Fœtus Extracted per Anum, Four Years and Six Weeks after the Completion of Natural Term.*—Americ. Jour. April.
30. Young, W., of Aurora, Ill., *a Case of Extraction of the Bones of a Fœtus from the Peritoneal Cavity.*—Chicago Jour. I. 8. Aug.
31. Lattey, P., *Case of Extra-Uterine Pregnancy.*—Med. Tim. and Gaz. 428. Sept. 11.
32. Levy, *Extra-Uterine Gestation, with Perforation into the Bladder.*—Schmidt's Jahrb. No. 11.
33. Harrison, G., of Macon, Ga., *Medico-Legal Notes of a Case of Extra-Uterine Pregnancy.*—Southern Jour. XIV. 10. Oct.
34. *Extra-Uterine Pregnancy; its Differential Diagnosis from Peri-Uterine Hematocele.* (Discussion of the Soc. Anatom.)—Gaz. Hebdomadaire. V. 26.
35. Schultze, B., *Twin-Birth with Five Extremities Presenting.*—Monatschrift f. Geburtsk. May.



36. Duval, B., *on a Case of Delivery with Twins*.—Rev. Thér. du Midi. XII. June.
37. Goldberg, *on a Remarkable Case of Twin-Birth*.—Oesterr. Zeitschrift f. prakt. Heilk. IV. 39. Sept.
38. Webb, W., *Birth of Triplets; Adhesion of the Placenta; Recovery of Mother; Death of the Children on the 2nd and 3d Day*.—Lancet, I. May.
39. Marx, *on a Case of Birth of Triplets; Diagnosis before Delivery; Three Living Children*.—Jour. de Bord.—Mon. des Hôp. VI. 129.

Although Dr. Thomas's plan of managing the funis in cases of prolapsus has been taught for years past by Dr. Bloxam, in his lectures at the Grosvenor Place School of London, it was not known to the profession at large. Therefore Dr. Thomas's re-invention and publication of the proceeding, deserves the gratitude of all obstetricians. It is a procedure which has already saved many lives, which would have been lost, if it had not been for the application of Dr. Thomas's plan. The writer of this himself has treated lately a case of prolapsed funis of the worst kind, viz.: connected with a cross presentation,—by placing the patient à la vache. The cord was retained perfectly, and the child some time afterwards extracted alive. Of course we cannot expect that this proceeding will work so admirably in every case, but if only the life of one child should have been saved by the method in question, this would be sufficient cause of gratitude towards its inventor.

DR. McCaw reports a case of uterine hydatids and says: "It is difficult to say, whether we should believe in the theory laid down by most of pathological anatomists, that these hydatids were independent organisms of low vitality, parasites of the body," etc., (sic!!)

DR. READ's interesting paper was read before the Boston Society for Medical Improvement, and is intended to clear up some dark points of the theory of the development of the uterus in cases of placenta prævia. The question as yet unsettled is, whether irrespective of the position of the placenta upon the uterine walls, the fundus always begins to expand before any other portion of the uterus. The arguments brought forward in its favor by Doherti, Jacquemier, Murphy, Cazeaux, Ingleby, Ramsbotham, Lee, Blundell, J. Churchill, Meigs, Moreau, and many others, are reported and duly criticised. Besides the weakness of the evidence upon which these authors founded their theory, it cannot account for all the phenomena which occur in placenta prævia. Why do some females who have the placenta attached to the proper neck of the uterus go their full term, while the majority of those who are in the like situation do not go so long? To give a satisfactory and sufficient explanation of these hitherto unexplained phenomena, Dr. Read proposes the following theory: the attachment of the placenta to any portion of the uterus causes a development at that place, which proceeds, *pari passu*, till the limits of growth in the placenta having been reached, the enlargement is continued and kept up by the pressure constantly exerted on the uterine walls by the growing contents till the time of parturition. In this way, the fact that very often, in complete insertion of the placenta, hemorrhage

does not occur until the full term has been reached, finds a sufficient explanation. For by the time that the placenta has passed the period of its most rapid growth, the foetal mass has already begun to exert its effect upon the uterine walls to enlarge them ; the added strength which the thick, firm disc of the placenta gives to the cervical portion to resist this distension, is enough to prevent its being felt in that direction. It applies also to partial presentations of the placenta of every degree, from that in which the os is almost entirely covered to that in which the edge only of the placenta is at its margin, the latter instance having a marked tendency to early bleeding. For just in proportion to the amount of the neck of the uterus covered by the placenta is it protected from the distending process to which it is exposed during the latter periods of pregnancy, and in just such proportion will the hemorrhage appear late or early. Those cases, also, where the placenta is on the cervix, in the immediate vicinity of the os, but at the same time not overlapping it, instances which do not manifest a hemorrhagic tendency, as was to be expected, are perfectly accounted for by the same reasoning.

DR. BARNES' lectures on placenta prævia were delivered in 1857, before the Medical Society of London. He gives a very philosophical view of the nature of placenta prævia ; and while he repudiates any attempt to establish dogmatically a new method of treatment, he calls in question the propriety of employing empirically the remedial measures now generally practiced. Dr. Barnes' treatment of the affection is eclectic, each case being treated according to the peculiar features it may present.

DR. CURREY reports a case of central location of the placenta. After the os was somewhat dilated, Dr. Currey at the time of a severe pain, pressed his finger firmly against the placenta, and gradually worked it through the spongy mass till he had reached the membranous surface. The penetration of this gave a free passage to the waters ; now the head could be felt presenting ; grasping the abdomen firmly with the left hand, and making pressure upon it, he found the head descend at the return of a pain, and begin to engage in the expanded mouth. But the placenta was also pushed forward with it, to the great fear of Dr. C. (?) He now administered a full dose of select powder of ergot ; a pain soon came on, but as it expelled the child, it continued to expel the placenta also, so that one half of it fully was now protruded into the vagina. Another strong pain passed the child beyond the placenta, and soon expelled it.

In concluding, Dr. C. says : " My whole course consisted simply in endeavoring to check the hæmorrhage, by cold applications and recumbent position, until the favorable time for the laceration of the placenta, through which I hoped and was gratified in seeing the child safely pass." From this it seems that Dr. C. wanted the child's head to pass through the artificial opening in the placenta, and adds, he was gratified in seeing it pass. This latter remark is contradictory to the account of the birth as stated above, whereby it appears that the child passed beneath the placenta, leaving it in the vagina after it was born, and this is the only course possible. How can Dr. C. imagine that a child's head would pass through a small hole

made by the finger in the placenta, unless the latter was in unusually strong marginal connection with the womb by false adhesions? How can any one suppose that such a broad surface as a child's head is, would pass through this small artificial opening? The head will always sooner push the placenta before it, and finally pass by it, just as it happened in this instance. Moreover, this method of perforating the placenta, is not a new one, as Dr. C. seems to suppose. *Levet, Merriman, Gooch, and Löwenhardt*, proposed to make an opening in the placenta, to dilate it, in order to enable the operator's hand to enter through this hole, to turn the child, and extract it afterwards. Even this by far more reasonable proposition, has not been found worth while to be tried by the profession, from reasons too obvious to discuss.

DR. SPIEGELBERG reports several cases of placenta prævia, and cautions not to rely too much on plugging the vagina in cases of severe hæmorrhage from placenta prævia, this applying more particularly to the caoutchouc bladder-plug (*colpeurynter*). In some of the cases reported, the blood passed by the plug, or collected above it in that large space of the laquear vaginæ which remained between the plug and the uterus.

The discussion of the *Obstetric Section* of the New York Academy of Medicine on removal of the placenta in cases of abortion, was opened by Dr. Gardner with the remark, that in cases of retained placenta, after a miscarriage, he introduced a small pair of polypus-forceps, and withdrew the afterbirth. In the progress of the discussion, the use of instruments in similar instances, was generally rejected, because ergot, the tampon, or the operator's hand, were considered as remedies answering all purposes. Dr. Barker's method, which has been successfully applied by the writer of this many times, is the following: a compressed sponge of the proper size is introduced into the cervix, in order to stop the bleeding, and excite uterine action, so that the ovum, or placenta, is completely detached. In conjunction with this, an enema of the oil of turpentine (with starch) is thrown into the rectum, and retained as long as possible, repeating it as soon as it comes away. The turpentine in this way acts as a hemostatic and an oxytocic.

DR. GIBBS reports two cases in which only part of the ovum had been detached, while the remaining portions caused a violent hæmorrhage. All the styptic remedies had been tried in vain, and as the portion retained in the uterus could not be reached with the finger, Dr. Carey's decidual separator was introduced into the womb, and the membranes removed, whereupon the hæmorrhage stopped immediately. Both cases are full of interest, and a fit supplement to the discussion in the Academy just mentioned.

DR. DUBOIS remarks that the adherence of the placenta was perfect or imperfect; that in the former instance, the after-birth is simply retained, while partial adherence is followed by hæmorrhage, because the utero-placental circulation goes on undisturbed, and the tendency of the blood rushing towards the entire placenta is unchecked, from which place the blood escapes freely out of the opened blood-vessels. The time allowed to wait for the expulsion of the

placenta by the author is one or one hour and a half, after the birth of the child.

DR. LOGAN's article on a case of abortion, etc., is the choicest piece of *self-mystification* on record, bearing full evidence of the fact, that Kansas is greatly in want of literary and scientific immigration. Dr. Logan attended a five month's abortion case, and after removing the ovum, he "found something he had never seen before, the placenta and the greater part of the chord presenting the curious anomaly of being entirely *external, separate, and distinct* from the membranous enclosure of the child. The cord was given off about its centre, and after proceeding a distance of sixteen inches, it entered the chorion and amnion by a distinct perforation. The decidua vera not only lined the placenta, but presented the appearance of a cellular membrane, with the fleshy particles of the placenta deposited within its meshes, as if it were the sole agent in its formation." Now from this description, it is as clear as daylight, that the doctor, while removing the ovum, had severed the foetal from the uterine portions of the placenta, as it may easily happen with a four or five month's ovum. "This is but a single case," says our author, "but the fact is here ; a placenta has been in *one case* perfectly and apparently, naturally formed, without any possible communication with, or influence from the chorion." "Regarding the decidua as an exudation of coagulable lymph" (!) Dr. Logan proceeds to revive Hunter's dead theory of placental formation.

Dr. THOMAS laid before the New York Academy a plan of treatment for prolapsed funis which he had proposed in a course of lectures on obstetrics, delivered in the University Medical College of this city two years ago, and which he has since taught, but had waited for clinical evidence before bringing it before the profession. The causes of the great persistence of this accident, said he (whatever may have originally produced it), may be stated as these : 1st, the slippery nature of the funis ; and 2nd, the inclined direction of the uterine axis, which being in a line running from the umbilicus, or a little above it, to the coccyx, favors very much the tendency of the slippery part to roll outwards. These conditions he had thought might not only be overcome, but might themselves be rendered serviceable in effecting reduction, by inverting the uterine axis by placing the woman on her hands and knees, in the posture employed by surgeons in operating on the uterus and vagina. He had now tried this method in two cases, and reported as follows :

The first was a robust Irish woman, a multipara, who was sitting by her bed when the waters broke, and brought down a loop of the cord. It had been returned to the uterus repeatedly by the physician in attendance, and the porte cordon recommended by Dr. Ramsbotham was used to retain it. At each successive pain, however, it again prolapsed, and when he saw the case it was suffering from pressure by the descending head. He repeated the attempts which had been made by returning the cord, but, like them, his were unavailing. Placing the woman on her knees, with her face and chest resting upon the bed, he now proceeded to return the cord, when he discovered that without his aid it had retreated—and the labor proceeded without difficulty—a living child being soon born.

To the second case he was called before the waters had broken, and in the unruptured bag he detected the cord in large amount. As the os was fully dilated he ruptured the bag, and instantly the cord descended, and appeared to fill the vagina. Pushing it up beyond the head in an interval, he now waited to see whether it could be retained there during the next pain, but a large loop was at once forced down, and this occurred two or three times as the result of this attempt. The woman was now placed in position, and although the cord did not, as in the first case, reduce itself, no part of it once pushed up returned, and the labor safely concluded.

In both these cases the woman was allowed to choose her position after the head had fully descended, and occupied the pelvic cavity.

The author, in concluding, expressed his regrets that the plan proposed should not have been more fully supported by clinical facts, and stated as his reasons for bringing it forward in its present condition, the conviction which he felt that the simplicity of the method would at once recommend it for trial, and his desire cordially to invite the profession to test it, and give it its proper stand, whether of credit or of discredit, among the means at present at our command in treating this class of cases.

The rules of treatment pointed out were these :

1. If the cord is detected before the waters have broken, let no manual assistance be offered, but place the woman at once in position, and trust to this for its return to the uterus.

2. Should the waters have flowed away, and left the cord below the head, place the woman in position, and push it up with the hand if practicable, or with a *porte cordon*, consisting of a gum elastic catheter, with a tape passed through it, if not so—

3. Let no manipulations be commenced until the woman be placed in position.

Dr. MENDENHALL reports a case of prolapsus of the umbilical cord, head presenting, which was successfully treated by Dr. Thomas' method.

Dr. LEVY remarks, that the number of cases recorded in our literature as so-called *vesical pregnancy*, is very limited. The first instance of this kind was observed by Dr. Ebersbach, in 1714 (*Ephemer. natur. cur. cent. 5 obs. 20*). Meissner (*Frauenkrankheiten. Bd. 3*) mentions only 6 more cases, and Levieux (*Bullet. des sciences méd., 1822*) reports some instances where particles of foetal bones had entered into the composition of vesical stones in the form of nuclei.

Dr. Levy's patient was 54 years old, and had given birth to 3 children. When 37 years old, she again thought she was in the family way. Between the 2nd and 3rd month she began to flood considerably without any ostensible cause, and she was of opinion that she had miscarried. After the lapse of one month the bleeding discontinued, and the menses did not come back any more. The woman began to grow very stout, the mammæ increased considerably in size, and when she was gone about half of her time, as she thought, she fancied that she felt the quickening. Altogether, her condition was favorable ; nothing out of the way was observed with regard to the abdomen ; the breasts contained milk, and the feet were some-

what œdematous. When she calculated to be at her full term, she suddenly experienced a movement in the lower abdomen, just so as if the foetus had turned round ; this was accompanied by a severe chill, which repeated several times. A few days afterwards energetic labor-pains set in, which, however, soon stopped entirely, when a short hemorrhage occurred. The attending midwife declared to have felt something like the shape of a presenting head, but all was not right. Instead of uterine contractions, a violent pain was now felt in the lowest part of the stomach, right above the symphysis pubis. This painful sensation went away gradually, while the abdominal tumor grew smaller and harder ; the menses reappeared, and the patient recovered so entirely that she began to resume her ordinary occupations.

Early in 1854, *i. e.*, 15 years afterwards, the patient was taken with symptoms of biliousness, with pains in the pubic region, combined with constant inclination to pass water. Notwithstanding all this her general health remained in pretty fair condition, and it was only towards the end of December that the urine began to appear thick and milky, with a disagreeable smell, till at last it became puriform. The sensation of bearing down now increased considerably, when, without the least difficulty, a portion of a foetal bone was passed through the urethra. From this time to April, 1855, three more pieces were discharged in the same way. The patient was now very pale and lean, still comparatively healthy. Up to February 1, 1856, fifteen large and numerous smaller bones were passed, the urine had a very foetid smell, and contained besides a good deal of pus, a considerable quantity of minute bony particles. At last the strength of the patient gave away, and she died on May 29, 1856.

*Post-mortem examination.*—No trace of peritonitis. After the intestines were removed, a hard, uneven tumor, covered with a serous membrane, was detected ; it was coherent with the spinal column, and attached to the rectum. This tumor was of the size of a child's head, was situated exactly behind the symphysis pubis, and contained smaller and larger osseous plates. The uterus, of normal size, was pushed towards the left side. The extra-uterine sac, which contained the greatest portions of the bones, was located towards the right side, between uterus and rectum. In front it communicated freely with the bladder and backwards into the rectum. The bladder was filled with numerous foetal bones, of different sizes, the larger ones being incrustated to a considerable extent, while the walls of the bladder were considerably hypertrophied.

The author, in ventilating the question, whether, under similar circumstances, an operation should be resorted to, remarks, that the high operation for stone had been performed for the said purpose, but always with unfavorable result, and he, therefore, proposes to try urethrotomy as a less dangerous operation. The very interesting article is concluded with a short analysis of Dr. Josephi's case of vesical pregnancy, published in a thesis on extra-uterine pregnancy, Rostock, 1803. In this instance cystotomia alta was performed, but the patient died 3 days after the operation.

The remarkable feature in Dr. HARRISON's case of extra-uterine pregnancy, was the presence of two ligaments attached to the placenta, independent of the cord; one about six inches long, connecting with the transverse colon; the other about four, connecting with the body, just above the point of the ileum.

The parts presenting after the rupture of the membranes in Dr. DUVAL's case were, nates and hand of one fœtus; elbow and foot of the other. Our author applied the forceps to the nates and delivered the child without difficulty, whereupon he seized the foot of the other child and extracted it without difficulty. Both children were born alive and continued in good health.

In the case published by Dr. GOLDBERG, a woman was delivered naturally of a healthy child, when ten minutes afterwards a second apparently five months' fœtus was extracted. It had the appearance of an alcohol preparation; it was compressed from both sides, thus representing only the silhouette of a fœtus.

## XI. REMEDIES.

1. Lee, R., *History of a Case in which Death was Quickly Produced by the Inhalation of Two Drachms of Chloroform in the First Stage of Natural Labor*.—Med. Tim. and Gaz. 436. Nov., 6.
2. Rigby, E., *on the Use of Chloroform in Natural Labor*.—Ibid. 429. Sept. 18.
3. Williamson, W., *Chloroform in Midwifery*.—Ibid. 432. Oct. 9.
4. Cotting, B. E., of Roxbury, *the Extent to which Anæsthetic Agents should be Used in Midwifery*.
5. Debussaux, A. N., *on the Employment of Chloroform in Cases of Hysteria*, Thesis (in French). Strassbourg, Bergen-Levrault. 4.
6. Afflick, J. G., *Observations on the Use of Ergot as a Hæmostatic and Abortive*.—Transactions of the Belmont Med. Soc.
7. Fauvel, *Peculiar Effect of Ergot during Labor*.—Rev. Méd. July 15.
8. Heslop, T. P., *Suggestions relative to the Employment of Tincture of the Sesquichlorid of Iron in Puerperal Peritonitis, Iritis and Allied Disorders*.—Dubl. Jour. LI. August.
9. Bonfils, *on the Use of Opium and Turpentine in Puerperal Fever*.—Gaz. des Hôp. 11.
10. Vedder, J. H., *Veratrum Viride in Cases of Puerperal Fever*.—Americ. Monthly. January.
11. Clarke, A. B., of Holyoke, Mass., *on the Treatment of Puerperal Mania by Veratrum Viride*.—Brit. Jour. LIX. 12. Oct.
12. Gros, L., *on the Use of Pepsine in Cases of Vomitus Gravidarum*. Bull. de Thér. Feb.
13. Dezou, *Vomitus Gravidarum, Treated by Cold Water*.—Rev. de Thér. 9.
14. Darsch, E., *Yarrow (Achillea Millefolium)*.—Peninsular Jour. I. 7. Oct.

15. Ronzier-Joly, A., *on the Suppression of the Lochial Discharge in Puerperal Disease; a Simple Remedy to Reestablish it.*—Bull. de Thér. LV. 8.
16. Beauvais, *Uva Ursi as an Obstetrical Agent.*—Bull. de Thér. Jan. 30.
17. Fenner, E. D., *Remedy for Dysmenorrhœa and Consequent Sterility.*—New Orleans Med. News. July.
18. Barker, O. W., of Omega, Texas, *Remedy for Dysmenorrhœa.*—Ibid. Nov.
19. Merrill, A. P., of Memphis, Tenn., *Dysmenorrhœa Cured by Stramonium.*—Ibid. Oct.
20. Lobach, *Semen Cardui Mariæ and Cardui Benedicti in Cases of Uterine Hemorrhage.*—Jour. de Brox. June.
21. Williams, H. L., *Port Wine Enemata as a Substitute for Transfusion of Blood.*—Brit. Jour. Sept. 4.
22. Bonafond, *on the Application of Solid Caustics in Diseases of the Womb.*—Bull. de Thér. LIV. May.
23. Aran, *Laudanum Dressings in Painful Affections of the Uterus.*—Ibid. LIII.
24. Tilt, E. J., *on the Right Use of Sedatives in Diseases of the Womb, and in Morbid Menstruation.*—Lancet. July.
25. Parks, L., *on the Use of Potassa com Calce in Uterine Disease.*—Boston Jour. LIX. 9.
26. Joachim, W., *on the Use of Belladonna in Neuralgia Uteri.*—Ungar. Zeitschrift. IX. 9.
27. Aran, F., *on Aloes Enemata in Uterine Catarrh.*—Bull. de Thér. LIV. March.
28. Caby, E., *on the Use of Sous-Nitrate of Bismuth in the Treatment of Leucorrhœa.*—Ibid. Sept.
29. Lecointe, *Tanninglycerol in Vaginitis.*—Ibid. June.
30. Bernard, M. Ch., *on the Treatment of Chronic Engorgement by the Ointment of Chlorjodide of Mercury.*—Gaz. Hebd. May, 21. N. Amer. Review. Sept.
31. Storer, H. F., *Caustic Potash as an Application to the Interior of the Uterus.*—Boston Jour. LIX. 11. Oct.
32. Aveling, J. H., *Gentian Tents in Partial Occlusion of the Uterine Neck.*—Med. Tim. and Gaz. June, 26.
33. Hartmann, *on Successful Treatment of Pruritus Vulvæ by a Strong Decoction of Helleborus Albus, Locally Applied.*—Annal. de Roulers. 21.
34. Imbert-Goubeyre, *on the Use of Arsenic in Pruritus Vulvæ.*—Annal. de Flandre. 21.
35. Macé, *on the Use of Mineral Waters in Female Diseases* (in French). Mortélimar, Bourron, 8. pp. 8.
36. Basret, *on the Use of Cold Water in Chlorosis.*—L'Union. 39.
37. Villemin, A., *Vichy-Water in Chronic Diseases of the Womb.*—Gaz. de Paris. 10.



38. Bruck, A. T., *on the Use of Driburg Springs in Diseases of Pregnant Women*.—Mon.-Schrift f. Geburtsk. XI. April.
39. Fleckles, *on the Use of Carlsbad-Waters in Diseases of the Womb*.—Schmidt's Jahrb. June.

Dr. LEE was fortunate enough to ferret out at last a case, where the administration of chloroform during labor was followed by sudden death. The husband of the patient had administered about two drachms of chloroform, when she threw herself violently back, gave a gasp or two, a slight gurgle was heard in her throat, and respiration and the pulse instantly ceased. This fact was communicated to the author by Dr. John Campbell of Langs. No post-mortem examination was made.—We leave it to the judgment of our readers if they will be inclined to take this case as one of death from chloroform. The circumstances connected with the management of the chloroform, the small dose administered, the source from which the communication emanates, the want of a post-mortem examination are all circumstances, which must be taken into consideration so as to guide our judgment. But even suppose this and some few other women had really died from the use of chloroform? What does this prove against the remedy? Nothing but the often repeated advice, to be cautious with this drug. If we hear of but very few cases of death from chloroform among women in labor, this is owing to the fact that the number of parturient women to whom chloroform is given, is comparatively small, when compared with the number of persons chloroformed under other circumstances.—E. N.

Dr. RIGBY is of opinion, that chloroform, when judiciously administered, has a more favorable influence as regards the patient's recovery after a severe labor, than when it has not been used.

Dr. WILLIAMSON looks upon chloroform as so great a boon in (almost all) midwifery cases, that he would no more think of attending a patient in labor without having chloroform beside him, than he would think of not having a catheter in his pocket.

Dr. CORRING prefers ether to chloroform, because he thinks it to be less dangerous for the life of the patient. The conclusions to which he comes from its administration in several hundred cases of labor, are as follows :

1. In ordinary cases of midwifery, while ether may be allowed in moderation, when importunately demanded by the patient, it is quite as well in the long run, to say the least, to let normal, uncomplicated labors proceed uninterfered with.
2. In painful, laborious, or complicated labors, and in cases of great tenderness or great rigidity of the organs, of extraordinary susceptibility to pain, and where there is great nervous irritation, or undue apprehension of danger, ether, if favorably received, should be used to the extent of overcoming the abnormal condition and suffering.
3. In cases requiring manual or instrumental interference, ether should be used to the same extent, and upon the same general principles as in other operations.
4. In puerperal convulsions especially in those having the characteristics of uræmic eclampsia, ether should be given as soon as there are in-

dications of an approaching fit, and be continued if seemingly efficacious, until the paroxysm has subsided, and quiet sleep is induced; or until other medicine, if desirable, can be swallowed—care being taken to allow a sufficiently large quantity of pure air, and not to continue the ether if coma supervene.

According to the experience of Dr. AFFLICK, not only does the ergot act well as a hæmostatic previously to delivery, but it possesses also "a supreme power in the control of post-parturient hemorrhages." Whenever the system becomes fully imbued with the ergot, his observations confirm him in the opinion, that there is little to be dreaded from the occurrence of bleeding. He thinks that its dangers to the life of the child are less, than is generally believed by the profession.

Dr. HESLOR having seen good results from the administration of sesquichlor. of iron in epidemic diphtheritic affections of the mouth and throat, and being dissatisfied with the discussion of the Paris Academy of Medicine on puerperal fever, for not having agreed upon a prescription for the cure of said affection he proposes to try the tinct. of sesquichlorid of iron, and the local application of dilut. muriatic acid in puerperal peritonitis. "So far as Dr. H. knows, obstetricians have never made an ocular examination of the walls of the vagina in puerperal fevers." The writer begs leave to inform Dr. H. that obstetricians are in the habit of inspecting the vagina, and most thoroughly too. Moreover, the writer can inform Dr. H. that obstetricians do "treat the vagina with as little ceremony as the fauces," applying solid caustics, acids, and camphorized ether to the frequently enormous ulcerations, in cases of puerperal fever. For puerperal fever in general, we have not, and will never have a panacea, but there is a species of the fever, viz.: the *diphtheritic* form, seizing almost exclusively upon the mucous membranes of the system, in which the use of perchloride of iron may be reasonably tried.

Dr. BONFILS reports that Dr. Trousseau had treated several cases of puerperal peritonitis, oophoritis, etc., by large doses of opium (5 to 10 cgrm. in a day), injections with the oil of turpentine (oil of turpent. 10 to 30 grm; 1 yolk of egg, water 100 grm., with some mucilage, twice a day), and the oil administered by the mouth in capsules (6 grm. a day).

Dr. GROS reports seven cases, partially from his own experience, partially from that of other practitioners, where the administration of pepsine cured the vomiting of pregnant women, in some instances where all other remedies had failed to make the slightest impression on the disease. Far from advising its application as a general rule, Dr. G. recommends it for all those cases where the stomach has participated actually in the morbid condition, be it by an alteration of the secretory activity, or in consequence of its being constantly called into unnatural activity.

Dr. DEZOU recommends in cases of obstinate vomiting to apply a wet towel upon the epigastrium, to be changed every five minutes until the cure is completed.

Dr. DARSCH reports some cases of successful application of the herb of *Millefolium* for promoting the menstrual flux.

DR. RONZIER-JOLY recommends the same remedy for reëstablishing the lochial discharge in cases of suppression in puerperal diseases.

DR. BOUVAIS has successfully applied the *folia uvæ ursi* in cases of atonic labor pains, and in hemorrhages from this same cause.

DR. FENNER states that he has used for some years in the treatment of dysmenorrhœa with great success the following mixture, originally recommended by Dr. Falk of London :

R.—Gum. Guaiac,  $\mathfrak{z}i.$ ; Balsam. Canadens,  $\mathfrak{z}viii.$ ; Ol. Sassafras,  $\mathfrak{z}ii.$ ; Merc. Corros. Sublimat,  $\mathfrak{z}i.$ ; Spir. Vin. Rectif.,  $\mathfrak{z}viii.$

“Dissolve the guaiac and balsam in one-half the spirit, and the corrosive sublimate in the other. Let the guaiac and balsam digest for several days ; then pour off the clear liquor, mix with the sublimate, and add the oil. *Dose*.—Ten or twenty drops night and morning in a glass of wine or water, *pro re nata*.”

This was called by Dr. Falk “*Tinctura antacrida*.” Dr. Fenner says that he usually directs the patient to begin a day or two before the expected period, and take twenty-five drops in a infusion of sage or sweetened water, night and morning, until the discharge is established ; then cease till the next period. In obstinate cases, the medicine should be commenced a week or ten days before the period ; and if the pain appears, the medicine should be taken every four or six hours till relieved. Dr. Fenner has known immediate relief to be given by a single dose taken in the paroxysm. In very violent cases, in which the pain was excruciating, causing shrieks or even violent convulsions, he has successfully applied the following :—R.—Spir. camphor,  $\mathfrak{z}iii.$ ; chloroform,  $\mathfrak{z}ii.$ ; tinct. opii.,  $\mathfrak{z}i.$  M. S.—A teaspoonful in sweetened water once an hour till relieved.

DR. BARKER proposes the following remedy for dysmenorrhœa :—R.—Gumm. guajac,  $\mathfrak{z}i.$ ; Potass. Nitr.,  $\mathfrak{z}i.$ ; Flor. Sulphur,  $\mathfrak{z}i.$  To be well ground in a mortar and put into one pint of brandy or good whiskey, and after standing a few days, to be taken twice a day one tablespoonful. For retention and suppression of the menstrua the following is recommended :—R.—Ol. Terebinth,  $\mathfrak{z}i.$ ; Ol. Sassafras,  $\mathfrak{z}ss.$ ; Spir. Vini. rectif.,  $\mathfrak{z}viii.$  M. S.—To be taken in tea, in doses of  $\mathfrak{z}i.$

DR. MERRILL has successfully applied the extract of Strammonium in a case of intractable dysmenorrhœa. He advises to begin with one grain doses every third hour, ten days before the expected time, and to diminish the dose in case of beginning narcotism.

DR. LOBACH recommends a remedy (before the Med.-Physiol. Soc. of Würzburg) which had been almost forgotten, if it was not for the apostles of Rademacher, who make use of the *semen cardui* in cases of abdominal plethora and its consequences. Dr. L.’s experience goes to prove that it is a sure remedy in uterine hemorrhage, even when all other means have failed, but mostly in the flooding from a stasis in the circulation of the *venæ portarum*. The dose is from 2 to 13 drops of the tincture every half or third hour.

DR. WILLIAMS recommends enemata of port wine in case of post-partum hemorrhage, and records a case in which he resorted to it successfully. The patient was in the most alarming state of prostration, pulseless at the wrist, with cold extremities, &c. Dr. W. com-

menced by administering four ounces of port wine with twenty drops of tincture of opium. The patient speedily manifested signs of improvement. In half an hour he repeated the enema with marked advantage, and the patient was soon out of danger.

The local application of sedatives, though very extensively in use as a local remedy in the various forms of pain in other localities of the system, is not sufficiently followed in the treatment of diseases of women. Dr. TILT, therefore, proposes to show in this article, what good results may be obtained by application of narcotics to the female organs. In treating neuralgic affections of the womb, ovaries, abdomen, etc., the source of the disease, often lying in a slight ulceration has to be removed first, and afterwards, or combined with surgical treatment, the local use of anesthetics is followed by very satisfactory results. The use of sedatives in such cases paves the way to a more rapid cure, especially when several remedies are combined. For this purpose, Dr. Tilt orders a camphorated liniment, to four ounces of which he adds half an ounce of laudanum, and two drachms of tincture of aconite. This has to be rubbed carefully for five minutes on the lower part of the abdomen, or on the sacral region. Upon this, a wadding poultice has to be applied and kept in place by a piece of oil-silk, sufficiently large to wrap round the loins and fold over in front. Should this be ineffectual, sedatives by the rectum are prescribed. Such measures are generally found successful; but sometimes the patient will not or cannot retain the medicated fluid, and narcoting suppositories are objected to, or else the neuralgia may be too severe to yield to the treatment. In a case of this kind, Dr. Tilt placed one grain of acetate of morphine in a little cotton wool, folded it up, tied a piece of twine round it, and carefully applied it close to the neck of the womb. This was withdrawn by pulling at the piece of twine, at the end of twenty-four hours. Three days afterwards two grains of morphine salt were applied in the same way; and four days afterwards three grains. This medication had a really wonderful influence upon the neuralgic disease, so that the lady affected, who for months had been confined to bed, was now able to sit upright for several hours, and was not overfatigued by a two hours' drive, and in a few weeks she was able to leave for the seaside. This treatment was always found successful in cases of uterine neuralgia. The cotton-wool charged with morphine, may be applied without using the speculum. If the forefinger of the right hand be introduced into the vagina, along this finger the left hand can easily glide the forceps armed with the cotton-wool, until the neck of the womb is reached. When possible, this application is renewed every second day. Dr. Aran has extensively followed the same idea; his plan is to let fall one or two drachms of laudanum into the vagina per speculum, fixing the fluid in the vicinity of the womb by a tablespoonful of powdered starch.

Dr. PARKS's article was prepared with the intention to prove that the application of potassa c. calce outside and inside the cervix, if made with circumspection, need not do injury. Added, is a table showing the character and result of 37 cases in which this treatment was applied. The average number, to a case, of applications to, and

insertions within cervix uteri, of caustic potash, with or without lime, was 4; the average number, to a case of applications to the exterior of the cervix uteri of potassa cum calce, was  $3\frac{8}{7}$ . In one case the lesion was not satisfactorily made out. There was one case of abrasion alone; one of simple congestion; and one of probable uterine catarrh. In all the rest (34) there was more or less of hypertrophy or engorgement; in the removal of which lesions, the potash seemed to be most often useful. Only in one case (8) an injury is reported, *perhaps* depending from the application of this caustic, viz: inflammatory symptoms, with subsequent discharge of pus per rectum; in all the rest no injury is recorded. The treatment which Dr. Parks endeavors to sustain, is the making of one or more issues on the neck of the womb, the aggregate area of which issues is never to exceed the space which can be covered by a three-cent piece; bearing in mind that the diameter of the issue is usually about twice that of the cylinder of caustic. The contact of the caustic with the lining tissue, is usually continued from half a minute to a minute. The potash is always neutralized with vinegar before withdrawing the speculum. The potassa cum calce cylinders used by Dr. P., are those of Bennet, made by Squier of London.

In conclusion, a belief is expressed that, in hypertrophy and engorgement of long standing, the potash treatment is more effectual and rapid than the milder caustics.

Dr. ARAN strongly advocates the use of aloe injections for the cure of uterine catarrh. He administers every day or every other, according to the effect produced, first an erema of mere tepid water, and then one of the following composition: Aloes, castile soap aa. gr. 75 ad. gr. 150, boiling water  $\text{z}$ iii.

Dr. GABY recommends the bismuthum nitricum: 1. For simple vulvitis of small girls. 2. For vaginal leucorrhea. 3. For a form of whites, generally embracing vagina, vulva and urethra, which in most cases is of a specific nature. The powder is to be applied in substance over the affected parts, and with the aid of the speculum, when the disease is in the deeper portions of the vagina. Dr. G. strongly recommends this remedy as a very efficient one.

Dr. LECOINTE recommends to apply a tampon of cotton, covered with equal parts of glycerine and tannin to the vagina per speculum, in cases of vaginitis. After the first applications, the discharge generally increases considerably, and disappears soon afterwards.

The formula of chloriodide of mercury used by Dr. BERNARD for the treatment of uterine infarct is the following:—Take one part of iodine and two parts of calomel; reduce the calomel to a coarse powder, and introduce it into a matrass, heat it gently while stirring it, until it commences to sublime, then add iodine in small portions, and the combination takes place. For application to the uterus, from 50 to 75 centigrammes of this salt are mixed with 60 grammes of fat. M. Rochard recommended the use of this ointment only in cases of simple and subacute engorgement showing a tendency to become chronic. It has been applied in the following manner:—The neck of the uterus brought completely into view by means of a trivalve speculum, is cleared of the mucous covering it, with charpie or wadding,

or with a tampon soaked in glycerine, and applied the day before to the cervix. On the other hand a moderately thick pledget of charpie of a little larger dimensions than the cervix, is prepared, and its centre covered by a thin layer of the ointment, so that its borders remaining dry may defend the vaginal mucous membrane from contact with the remedy which would otherwise occasion inflammation. Then the pledget is carried up to the neck, either with the dressing forceps or by means of a wooden tube, one extremity of which is proportionate in dimensions to the cervix uteri, and in which slides a stopper which applies the pledget exactly to the organ. This done the vagina is filled with balls of wadding, and the speculum is withdrawn. Care has to be taken not to cram the vagina, as it would occasion unnecessary inconvenience and pain to the patient.

Six or seven hours after the application of the ointment, the different parts of the dressing are removed and the cervix is laid bare, which, on examination with the speculum, is always found covered with an albuminous exudation. From a number of five observations reported by M. Bernard, we take the following as a sample: Case IV.—Old engorgement, which had disappeared after injections of carbonic acid, but has returned in the last two months. Cervix round, smooth, but hard, not voluminous, and directed backward. Applications on the 7th and 21st of September and 9th of October. On this day the engorgement was much diminished, also the redness and anteversion. On the 18th the patient went out, feeling very well. In all the cases reported the amelioration was obvious and rapid. It is well to know that the application of the ointment produces, for some hours afterwards, more or less acute pain, which lasts from twelve to fourteen hours with intensity. The whitish exudation, which was mentioned above, is generally formed at the end of five, six, or seven hours. The process of elimination, the cicatrization of the wound consecutive to the separation of the eschar, and the resolution of the concomitant inflammatory tumefaction requires about eight to ten days. It is, therefore, advisable generally to observe this interval between two applications.

Dr. BRUCK remarks, that the Driburg Springs were generally well born by patients, even if they are subject to organic diseases or great irritability of the respiratory organs, owing to the small percentage of iron (0.85 grains in 16 ounces), and the unusually large amount of carbonic acid. This is the reason why women, even in the first months of pregnancy, may safely undergo a treatment with Driburg waters in cases of far advanced anæmia, while it was generally believed that a thorough mineral (iron) water treatment would invariably induce abortus. Dr. Bruck, at least, has successfully treated pregnant women with Driburg waters, and has seen that they had a good influence upon the fœtus. A lady, 30 years of age, was delivered of a microcephalic child 10 years ago. In her second pregnancy she bathed at Driburg, and gave birth to a strong, well-formed child. The third and fifth child were microcephali; at both these times she did not use Driburg. During the fourth gestation she bathed at Driburg, and had a perfectly healthy child.

Dr. FLECKLES has applied the thermal waters of Carlsbad (Bohemia)

successfully in functional derangements, hypertrophies, and fibroid tumors of the womb. Disturbances of the menstrual flux are benefited by the use of these waters, when they depend from uterine hypertrophy, combined with abdominal plethora. Fluor albus is cured by the use of this water, when it is caused by a disturbed state of health, be it of a scrofulous, gouty, or of a hemorrhoidal nature. Ovarian tumors lessen in size after a protracted use of the water. Disorders coincident with the change of life find a ready relief in Carlsbad.

[The writer can only endorse Dr. Fleckles' praise of this therapeutic agent for the cure of uterine disease. The water imported from Germany in stone bottles is almost as efficient as that taken fresh from the spring. I am constantly in the habit of prescribing it for patients affected with chronic metritis and hypertrophy, and I know of no remedy which is more certain to remove uterine congestion, especially in those numerous cases which are combined with a torpid action of the liver.—E. N.]

## XII. OBSTETRICAL OPERATIONS.

1. Meissner, F. L., *Statistics of Operative Midwifery*.—Monatschrift f. Geburtstk. IX. pp. 19—72.
2. Meissner, F. L., *Obstetric Resources of an Accoucheur in those cases of Contracted Pelvis, where a Full Grown Child can not be Born, unless Diminished in Size* (a historical sketch of the different obstetrical operations).—Monatschrift f. Geburtstk. April and May.
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Dr. MEISSNER's report relates to 3,811 women, who gave birth to 3,980 children, as 136 were twins, and 2 triplet births. These 3,811 labors called for operative interference in 3,025 instances, dynamic aid being required in 924 of these to effect a change of position. Out of 351 cases of turning, only 222 did prove completely successful for both mother and child. In 104 cases the child was born dead; in 2 cases the mother died from delivery, and in 2 after this had taken place. Dr. Meissner prefers turning by one foot, as all German obstetricians do, unless there is some indication for hastening the delivery. This rule is of especial importance when multiple birth is expected, so as to avoid getting hold of two feet of separate children. In one of the author's cases of triplets, all the children presented crosswise, and six lower extremities were felt. All the children were safely delivered by operating upon one foot at a time. Cephalic version is preferred by some practitioners, as giving the child the best chance; but it can only be tried when hastening the delivery is not an object. The author resorted to it in 6 cases. In 4 of the 351 cases, turning was performed by external manipulation, and in 3 by spontaneous version, the buttocks being forced by the presenting shoulder into the pelvis, and all the children being born dead. Of 1,853 cases of forceps operation, in 1,750 the head was the presenting part, and in 113 the forceps were used for its delivery in other presentations. Of the 1,754 children 99 were born dead, but many of these children had died during pregnancy, and were in advanced putrefaction on delivery. In 10 instances the child was hydro-

cephalic ; in 3 the mother was already dead ; there were 5 cases of spina bifida ; 7 deaths took place from prolapsed funis, and 3 from the arm and head being tightly wedged in together. In 4 instances the mother had suffered from repeated convulsive paroxysms. In other cases the application of the forceps had been repeatedly attempted by preceding practitioners, or the passage was narrowed by the presence of tumors. Extraction was performed in 247 cases, and became necessary when in breech, knee, or foot presentation, the child's life was threatened by cessation of pain, faulty position, or prolapsus of funis. Only 145 of the children were born living ; 13 had died through pressure on the funis, before the author's arrival ; 18 were in a state of putrefaction ; 10 were already born except the head ; 8 were immature, and in 5 others there was hydrocephalus, or other forms of dropsy. In 42 instances extraction had to be performed on account of cessation of pain after turning. Perforation has been performed by the author 32 times, and he has always followed the maxim, of never proceeding to the operation until assured of the child's death ; and it has several times happened to him to see living children born in cases which have been left for days together to the powers of nature, and which in previous labors had been delivered by perforation. Premature labor was induced 20 times, and never before the 36th week. Accouchement forcé was performed 55 times. By this term the author understands the whole series of operations (as artificial dilatation of the os uteri, bursting the membranes, turning, extraction, or removal of the placenta) which may be required for delivery when the further continuance of pregnancy is dangerous to mother and child. It is especially called for in certain cases of eclampsia, placenta prævia, and obstinate vomiting. Two instances are enumerated of opening the adherent os by the knife, and eight cases of its forcible dilatation. In thirty-three of these cases both mother and children did well, although, as the dilatation was usually undertaken for placenta prævia, most of the latter were born some weeks too soon. As the majority of cases (31) were examples of placenta prævia, in which hemorrhage had continued long before the patients were seen by the author, it is not surprising that ten of the mothers died. Of the 6 Cæsarian operations, 5 were performed on mothers being already dead, the children being saved in none. In the case of operation upon the living subject, both mother and child lived. The general results were as follows : Of the mothers, 41 were lost—25 during and 16 after delivery. Of the former 25, 11 were already lifeless when seen ; of the 14 others, 1 died from rupture of the omentum with internal hæmorrhage, 10 from placenta prævia, necessitating forced delivery, 2 from nervous shock after favorable labor, and 1 from hemorrhage. Of the 16 mothers who died after delivery, 1 died from cancer of the stomach, 1 from pneumonia, 3 after repeated attacks of eclampsia, 1 from putrescence of the uterus, 1 from typhus, 4 from puerperal fever following operative procedures, 1 from paralysis of the lungs, 3 from the consequences of loss of blood, and 1 after several hours' operative attempts by a country practitioner. Of the children, 399 were born dead, as already stated, under the various operations.

Besides these, 36 died within fourteen days after birth—4 from debility, from too early birth, 6 from atelectasis pulmonum, 2 from trismus, 1 from fissure of the cranium after a forceps operation, 1 from chronic hydrocephalus, and 2 from want of breast-milk. The author remarks that, as a general rule, forceps operations are found to be most frequent in cold, changeable weather, which induces rheumatic affections of the uterus, not only rendering dilatation of the os very painful, but delaying its accomplishment for days. When adhesion has taken place repeatedly at the same place, in consequence of an indurated condition of a portion of the uterine wall, we should, after the termination of the puerperal condition, endeavor to induce absorption by mercurial or iodine medicines, or by the use of alkaline mineral waters.

Every reader will be surprised at the great number of operations performed and the large amount of fatal cases. But this is readily accounted for by the fact, that scrofulous and rachitic diseases are unusually common among the inhabitants of Saxony, by the fact, that Dr. Meissner, the obstetric veteran, is the very man who is called in consultation whenever a case has come to the worst; by the fact, that German practitioners in general have to attend more often to pathological than normal confinements—the latter being left to the care of our well-trained and trustworthy midwives, who are forced by State law to call in a physician as soon as a confinement shows the slightest deviation from the natural course.

Dr. L. MAYER, in a paper read before the Berlin Obstetrical Society, on induction of abortion, considers this operation justifiable under the following conditions—1. Extreme contraction of the pelvis. 2. Very narrow constriction of the vagina. Some of the members of the Society remarked, that a vagina, contracted even to the utmost degree, was very often softened and easily dilatable during labor. 3. Large tumors of the rectum and of the vagina. 4. Retroversion of the pregnant uterus, if the reduction cannot be effected.

Dr. RATTENMANN has very properly, we think, deemed it important to reproduce his thesis on artificial induction of abortion, in an English version. The little book is intended to discuss the question, whether induced abortion in case of extreme narrowness of the pelvis, is to be received as one of the legitimate obstetrical operations. In order to prove under what circumstances induced abortion is a justifiable operation in a medical point of view, Dr. R. first considers the extreme limits of the dimensions of the pelvis, which will not even admit of the escaping of an immature foetus, and in which the operation in question is the only means left, to save the mother from almost certain death, viz.: Cæsarian operation; he then proceeds to give an account of the dangers connected with Cæsarian section and of the statistics of its fatality; nor does he omit to glance at the proposed craniotomy of the child, and to consider the dangers to which the mother is exposed in the different attempts of saving the child. The knowledge of the exact degree of pelvic contraction is of course not a sufficient guide to decide whether the child may be delivered by craniotomy with safety to the mother, or whether the extreme means, as the Cæsarian operation, or induction of abortion, are called for; the final settlement of this question depends too much

upon the size of the foetus. Although craniotomy has been performed with perfect success to the mother, in pelves with antero-posterior contraction up to  $1\frac{1}{2}$ " and 1" (Osborn, Wigand, Michaelis), a pelvis of less than  $2\frac{1}{2}$ " diameter, will, as a general rule, not allow even a dead and perforated foetus to pass, without fatally injuring the mother. In these cases the question arises, shall we put the mother to all the hazards of a Cæsarian operation, or ought we to sacrifice one life in order to save another. A perusal of the statistical records with regard to Cæsarian section, from 1750 to 1854, shows the following results : Of 801, upon whom this operation was performed, 507 died, and 294 were saved ; while not a single woman escaped of those who underwent this operation in one of the large hospitals of London, Paris or Vienna. The statistics of mortality would be greatly increased if all those cases could be taken into account which have not been published, as the greater number of Cæsarian operations which are kept secret, have resulted fatally (Naegele, Ionouli, Wilde). It further appears from the results recorded in literature, that perforation and kephalotripsis are operations which endanger the life of the mother to a considerable extent, and therefore the only way to safely deliver a woman with a pelvis, which makes all obstetric operations impossible, with the exception of the Cæsarian section, is the induction of abortion. When speaking of the comparative value of craniotomy and Cæsarian section, and mentioning that with a diameter of  $2\frac{1}{2}$ " craniotomy is more dangerous than the Cæsarian operation, Dr. Rattenmann says : "To get easily and pleasantly out of this difficulty, we have only to follow the advice of Kilian (Vol. II. p. 280), which is to desert the mother, meaning to let both mother and child perish without interfering. The words of Kilian are : 'When the accoucheur has exhausted all allowable means of persuasion, it is his duty to leave the mother, who refuses to submit to the Cæsarian section, without doing anything further.'"—In this statement the meaning and words of Prof. Kilian are misrepresented. The exact English version of Kilian's words runs as follows : "It is the duty (of every accoucheur) to leave this woman (who refuses to have Cæsarian section performed) when he has exhausted all means of persuasion, and to leave her to her own mercy, *until she has come to another conclusion, prompted perhaps by the advice of her minister, etc., or until the final death of the child imperatively demands perforation and extraction.*" (See : Die Operative Geburtshülfe, Vol. II., p. 737. Ed. 1849.) The meaning of these words differs much from that given by Dr. Rattenmann, and it does not deserve derision. Kilian does not leave the woman "without doing anything further," but he leaves her to consult with her relatives and friends before delivering herself up to an operation, which, with laymen, is synonymous with death. Thus he resorts to every means to avoid craniotomy, which in those cases where the pelvis is contracted to such a degree that Cæsarian section is thought of, must be considered the most disgusting and most dangerous operation in midwifery.—E. N.

The chief indication for inducing abortion is the refusal of the mother to allow the Cæsarian operation to be performed in case she should go to the full term.

Dr. Rattenmann asks : "Why should we hesitate to destroy the

child, where our object must be to preserve the life of the mother, and why should we not respect her just claims?" From the cases reported where abortion had been induced for diseases threatening the life of the mother, it appears that this operation was performed with perfect safety to the mother. When the shortest diameter of the pelvis is less than 2 or  $2\frac{1}{2}$ ", abortion is indicated, and is justifiable, when the pregnancy has not yet reached the seventh month. As a guide in practice, two tables are inserted upon page 33, representing the transverse diameter of the foetal heads at different stages of development from the 10th to the 40th week. Rejecting the objections raised to the operation, Dr. Rattenmann proceeds to discuss the different methods of inducing labor (rupturing the membranes; dilatation by sponge-teats; plugging of the vagina; injections into the vagina or uterus; galvanism; medicines). After having enumerated the medical reasons for inducing abortion, the author considers the operation from a theological point of view. The fifth commandment says: "ne occidas;" but taking into consideration the dangers incident to the Cæsarian section, the same injunction applies to the latter operation, and as the performance of hysterotomy is not considered a sin, no objection can be made to induction of abortion. In discussing the legal bearings of the question, Dr. Rattenmann strictly adheres to the rules laid down by Naegele, which are based upon the right of self-preservation. In applying the laws of self-defense to the induction of abortion, the author argues in this way: "In a case where abortion is positively indicated, two not equal rights are opposed to one another, but a weaker right comes in contact with a stronger. The life of the mother, namely, appears a real life, that of the foetus only a possible one. For as the foetus has not yet obtained that conformation and development to enable it to sustain life independently, we can only look upon it as a possible life, which in law, cannot, by any means, be considered of equal value with the real life of the mother." And further the author says: "The mother at the period when abortion may still be induced successfully, is actually under duress, on account of the great fatality of the Cæsarian section. We must therefore, if the natural development of the foetus proceeds uninterruptedly, look upon the mother as threatened by certain death; and as the mother is possessed of the natural right of self-preservation, of which she can only avail herself at the expense of the life of the foetus, we must consider the mother as under duress, and allow her the exercise of the right of self-preservation, to the fullest extent, in the induction of abortion. The circumstance that the physician is not himself under duress can be no motive to exclude his active assistance; for he is only the means and the tool of which the mother makes use to realize her right; the mother is the actually acting person; she causes the abortion, the physician, properly speaking, is only the medium, by which the mother strives to preserve her own life, and thus exercises her right."

Therefore, Dr. Rattenmann, thinks himself justified in recommending induction of abortion: (a) Whenever the mother refuses to submit to the Cæsarian section; (b) when embryotomy is not practicable, with a narrowness of the pelvis of less than  $2\frac{1}{2}$ "

DR. LEE reports a case where labor was induced before the fifth month of pregnancy in a woman with osteomalacia of the pelvic bones, in order to avoid Cæsarian operation.

DR. COHEN's method of inducing premature confinement, seems to become the favored method among German obstetricians, it has been performed this year almost exclusively of every other method hitherto in use for the same purpose.

DR. HAUSMANN published a successful execution of Cohen's method. A few hours after the first injection labor pains set in; twenty-four hours afterwards the orifice was fully dilated; two injections were made, and sixty-three hours after the first injection the membranes ruptured, and soon a living child was born.

DR. CREDE reports three cases in which he lately induced premature confinement for contraction of the pelvis, by injecting warm water into the uterus. In all the cases, only one injection of from eight to ten ounces of lukewarm water was required. The time from the first injection up to the expulsion of the child, was respectively sixteen, seventeen and one-half, and twenty-three hours. Two children were born alive; one was dead in consequence of prolapse of the umbilical cord. The women scarcely had any sensation of uneasiness when the water was injected.

DR. RIEDEL gives an account of his six cases of induction of premature labor, by intra-uterine injections. The fact, that four of these children were stillborn, is accounted for by their malposition and consequent turning, thus exculpating the method from any blame. The time of labor from the first injection was respectively five, six, eleven, forty, forty-four, and sixty-three and one-half hours. This makes an average time of twenty-eight and one-half hours. The author insists upon the necessity of retaining the injected water for some length of time in the uterus.

DR. BIRNBAUM used this same method in seven instances, partially combined with other methods, partially alone. Not one operation was followed by evil consequences. Of seven children, five were born alive; of which number, one died soon afterwards, two died during the operation of turning and extraction. No death occurred which might have been attributed to the method. The time between the injection and the beginning of the first labor pains was respectively one half hour, two, five, seventeen, seventy-two hours, and the time of actual labor respectively, one, three, six, ten, six, ten hours. Therefore, the effect of this method is sure and prompt, and demands only in very rare instances a combination.

DR. STOLTZ reports the case of a woman who was prematurely delivered by injections of warm water into the vagina, with a common enema-syringe. After the eighth injection, labor was fairly established. Dr. Stoltz seems to prefer this method to others.

DR. BRAUN, in considering the different methods for inducing premature confinement, proposes a new one, or rather a modification of Krause's method. Instead of an elastic catheter, Dr. Braun makes use of a gut-string, which he introduces into the cavity of the womb, between the walls of the uterus and the chorion, to remain there until expelled by the advancing labor. The principal reason why

Dr. Braun prefers a string, is the fact that the membranes had been ruptured in some instances, especially when the stiff English catheter, with inflexible mandrin, had been used for the purpose. This accident happened at the moment, when the mandrin was withdrawn, while it was not observed when an elastic, French catheter was applied with flexible mandrin. In order to make the use of strings even safer, Dr. Braun proposes to have the point of the strings dipped into hot water to the length of about half an inch, by which process they become very pliable and inoffensive. Dr. Braun resorted to this method of intra-uterine catheterism in twelve instances. The results were as follows: eleven children were born alive; five still-born; eight mothers recovered entirely; four died from diseases unconnected with the puerperal state (one pneumonia, one tuberculosis, two Bright's disease). Gut-strings were used five times, flexible French catheters four times, and in no instance the membranes were ruptured; the English catheters, having a very small amount of elasticity, were used three times, and in every single instance, the membranes were ruptured. The shortest time of labor after the introduction of a gut-string was five hours, the longest term one day. Added, is the history of the above-named twelve operations. As a sample, we will reproduce

*Case VI.* *Fistula vesico-vaginalis* and pregnancy; induction of premature labor, by means of a gut-string for contraction of pelvis; recovery of the mother.

Johanna H., thirty years of age, was delivered thirteen years ago of a premature dead child. At the full term of her second pregnancy, craniotomy was performed on her for contracted pelvis of 3-3 $\frac{1}{4}$ " antero-posterior diameter, as the forceps had failed to deliver her; a vesico-vaginal fistula was established after this operation. The fistular opening had been reduced to a very limited extent by suture, when the patient became pregnant for the third time. Her last menstrual courses appeared towards the end of October, 1857, and the first quickening was remarked in February, 1858.

On May 17, 1858, premature labor was induced by introducing a gut-string 10" long and 2" thick, between the uterine wall and the chorion, as high up as 8", to remain there. Two hours afterwards labor pains set in, which twenty-two hours later expelled the string, and effected the birth of a stillborn child (of 4 pounds weight and 17" length), in a cranial presentation. The mother recovered promptly.

In case V. it was impossible to push a gut-string through the os uteri, "as it was narrowed by cicatrices," and the membranes were ruptured on purpose by an English catheter.

DR. GARDNER reports the history of a woman who had been delivered three times by craniotomy for contracted pelvis. In the seventh month of her fourth pregnancy, premature labor was induced by the douche inserted into the mouth of the uterus.

DR. ANDREW SMITH reports a case where cephalic version was successfully resorted to in an arm presentation. Dr. Smith prefers it to turning by the feet, on account of the large amount of infantile mor-

tality in footling cases. He recommends it for all cases in which the safety of the mother does not call for speedy delivery.

By a comparison of the respective advantages and disadvantages of the operations of turning and forceps, in cases of protracted labor, where the head is floating above the brim, Dr. Figg advocates Simpson's method of turning, instead of delivery with the forceps. In a P. S., the author says :—"Since writing the above observations some months ago, I have attended sixty labors, three of which alone have been conducted as head presentations. Of the remainder, two were breach presentations, and the other fifty-five were conducted according to the principles advocated in the above communication, viz.: the children were all delivered by turning." It seems that our Lord made a mistake when he ordered the children to be born *calvaria prævia*, and Dr. Figg is called to correct this error.—E. N.

The article of Dr. BARKER on the comparative use of ergot and forceps is, as all his articles are, replete with literary and practical knowledge, and written with a great deal of sound judgment. He confines the use of ergot only to very few cases, viz., to cases of inertia uteri, in the last stage of labor, at a time when delivery is expected to be finished before an hour. In the first stage of labor it ought to be applied only in cases of partial presentation of the placenta, for the purpose of controlling the hemorrhage. With regard to post-partum hemorrhage, the author recommends this drug for those cases which occur in plethoric women, with flushed skin, thirst, and bounding pulse, while in those cases where the countenance is sunk, the lips blanched, the skin cold, the pulse gone, the opium will act like magic. As a remedy for retention of urine after labor, ergot in doses of twenty drops of the tincture, repeated every half hour, is of greatest importance. After stating the different indications for the application of forceps, Dr. Barker says :—"In conclusion, I must state my conviction, that the more enlarged is the clinical experience, and the more accurate the observation, the more rarely will the ergot be used before delivery; and furthermore, that the fear of delay in labor will be greater than the apprehension from the use of forceps."

Dr. BARKER gives the history of a case, where turning was substituted for the application of the long forceps, in order to save the life of the child. The danger consisted in the cord being wound three times around the child's neck, pulsating very feebly. If the cord should happen to be very short, not only would the life of the child be imminently jeopardized, but that of the mother, also, from forcible detachment of the placenta. The child was still-born, but resuscitated.

Dr. ELLIOT describes a new forceps with a pivot, which can be moved upwards and downwards, thus keeping the blades at a distance from another, so as to avoid undue pressure upon the foetal head. This sliding pivot is a happy modification of *Mende's* apparatus.—E. N. The usefulness of the instrument is illustrated by a large number of cases. In order to render the forceps applicable in a great variety of cases, especially when the head is floating above the pelvic brim, and when even the os is undilated, the instrument is slender and long, with only a slight pelvic curve. It is  $15\frac{1}{4}$  inches



long; extreme width between blades  $2\frac{1}{8}$  inches; length of blades  $6\frac{1}{4}$  inches; the width of the fenestra only  $\frac{1}{8}$  of an inch. The blades are very thin, the handles long and powerful.

Dr. LEE records a case, where it could not be ascertained whether the child was alive or dead, and he therefore proposes to inquire into the comparative temperature of dead and living children, in order to ascertain whether this way might not become of usefulness for diagnosis.

Dr. SCHULTZE remarks, that the limits of a justifiable operation with the craniotomy-forceps, for removing a full-grown child, are  $2\frac{1}{2}$ " or 2" antero-post. diameter of the brim. Below two inches the extraction of a full-grown child never ought to be attempted. The non-attendance to this rule has destroyed many mothers. Dr. Schultze cautions against the proposition of turning the child, in cases of considerable obstruction, to avoid craniotomy, because after the operation of turning has been performed, it is often necessary to apply the perforator to the head remaining in the uterus, beneath the shoulders—a feat very difficult to perform. We heartily subscribe the author's veto from our own experience; we have been led to act once on this principle, for the first and last time, proclaiming, with Dr. Dubois, "On ne m'y prendra plus!"—E. N. It is equally wrong to deliver a full-grown child through a pelvis of less than  $2\frac{3}{4}$ " shortest diameter. Between  $2\frac{3}{4}$ " and 2" shortest diameter, it is impossible to produce a living child on the natural way—the Cæsarian operation alone gives a chance of saving mother and child. But the life of the child has to be sacrificed, as soon as its integrity has become dubious, by previous attempts to operations or other circumstances. By Cæsarian operation we are justified to endanger the life of the mother for saving the life of the child; but to put a mother's life at stake for a child of questionable vitality, is an act of inhumanity. But in pelvic contractions of  $2\frac{3}{4}$ " shortest diameter and upwards, the rules to be followed are different. Here it is where to the forceps ought to be given a full and fair trial, and the perforator must be kept behind, until the former way is abandoned as insufficient. If, however, the child is notoriously dead, we must abstain entirely from the use of the forceps, considering that an easy kephalotripsis gives a better chance to the mother than a difficult forceps operation.

Dr. LEE reports another case, where he perforated and extracted the head of a child, which rested upon the perineum. In concluding the article he says: It might now I think be considered as an aphorism in midwifery, that the forceps is not applicable to dead children, nor in cases where the os uteri is not fully dilated, and the head has not descended into the cavity of the pelvis and can be felt.—The writer ventures to express his humble opinion, that a dead child, with its head resting upon the perineum, is quicker delivered by forceps than by the craniotome, and with the same safety and comfort for the mother.

Dr. BEN EZRI's article on the history of Cæsarian operation, is intended to prove, from the Jewish Talmud, that this operation had been in use as far back as 130 ante-christum. [This same opinion has been advanced by Dr. Mannsfeld in his thesis: Ueber das Alter

des Bauch- und Gebärmutterschnitts an Lebenden. Braunschweig, 1824. 8.—E. N.] The words alluded to by Dr. Ben Ezri may be found in the Mishna, Section VII. : "The male child born by an operation on the side of the mother, and one born after it (twins), neither of them is considered a first-born, in regard to inheritance or to the redemption by the priest ;" and further, in Tractat. Nidda, Sec. V. : "A child born by means of an operation performed on the side of the mother, the law does not compel the mother to observe the prescribed days of impurity and purity." From these quotations the author concludes that no better proof was necessary than the certainty with which the above passages express, not only a knowledge of the Sectio Cæsarea, but also that the operation was performed on living beings, and that their lives were preserved.

We have received this year an unusually large number of successful Cæsarian operations—2 by Dr. PAGENSTECHER, 2 by FRERICKS and GRÆSBECK, 1 by *Duclos*, 1 by *Alonso*, 1 by HAWKINS, 2 by MERTENS, and 1 by *Chevillon*—the latter in a case of extra-uterine pregnancy. The cases reported by Dr. Mertens go to show, what many obstetricians can confirm by their own experience, that often the apparently most unfavorable cases result in general satisfaction.

*Case 1.*—A primipara, 30 years of age, perceived the first labor pains on November 25, 1856 ; but during the progress of labor the head became so firmly incarcerated in the pelvis, that the enormous caput succedaneum prevented a closer examination of the pelvic diameters. It was impossible to apply the forceps, and when the child was ascertained to be dead, his head was perforated and diminished, after which the accoucheur was able to perceive that Cæsarian section was even now the only means left for delivering the woman. This was performed in the linea alba. The patient recovered finally, notwithstanding her taking cold three days after the operation, in consequence of which an obstinate cough, with swelling and tenderness of the abdomen, set in. She left her bed after four weeks.

*Case 2.*—A multipara, who had been delivered two years previously by the Cæsarian operation, was taken sick on January 6, 1856. The uterus was now situated in a sac formed by the abdominal wall, and extended downwards to the middle of the thigh ; the cut ran alongside the linea alba. The womb being very thin, the incision touched the placenta, which was removed immediately with the living child. The patient left her bed ten days after the operation, in consequence of which she caught cold and was taken with inflammation of the left ovary, after which an abscess formed and broke in the vaginal region. The patient also recovered from this accident in three weeks.

## REPORT

ON THE

## PROGRESS OF INFANTILE PATHOLOGY IN 1858.

## I. MANUALS, GENERAL PATHOLOGY, DIETETICS, STATISTICS, ETC.

1. Hennig, K., *Lehrbuch der Krankheiten des Kindes in seinen verschiedenen Altersstufen*. Zweite Auflage. Leipzig, 1858. pp. 476. (*Manual of the Diseases of Children in Different Ages*.)
2. Condie, F., *a Practical Treatise on the Diseases of Children*. Fifth Edition. Philadelphia, 1858. pp. 762.
3. Meigs, J. F., M.D., *a Practical Treatise on the Diseases of Children*. Third Edition. Philadelphia, 1858. pp. 724.
4. Tanner, T. H., *a Practical Treatise on the Diseases of Infancy and Childhood*. London, 1858. pp. 408.
5. Mayr, Fr., Politzer, L. M., Schuller, M., *Jahrbuch für Kinderheilkunde und Physische Erziehung*. 1857, 1858. I. 1—4. II. 1—2. (*Annual for Infantile Pathology and Physical Education*. Six numbers.)
6. Behrend, Fr. J., und Hildebrand, A., *Journal für Kinderkrankheiten*. 1858. 1—12. (*Journal for Diseases of Children*. Six bimonthly numbers.)
7. Mayr, Fr., on *Examination and Semiotics of Sick Children*.—*Jahrbuch f. Kind.* II. 1.
8. Cumming, W. H., on *a Substitute for Human Milk*.—*Am. Monthly March*.
9. Cumming, Wm. H., on *Natural and Artificial Lactation*.—*Am. Jour.* July.
10. Politzer, L. M., on *Scientific Dietetics and Physical Education of Children*.—*Jahrb. f. Kind.* 3, 4.
11. Routh, C. H. F., on *Vegetable Substitutes for Human Milk*.—*Med. Tim. and Gaz.* Aug. 21, 28.
12. Routh, C. H. F., on *the Mortality of Infants in Foundling Hospitals, and Generally as Influenced by the Absence of Breast-Milk*.—*Brit. Med. Jour.* Feb. 6, 13, 20.
13. Aravaca y Forrest, *Practical Considerations on Lying-in Women and Newborn Infants*.—*Il Siglo Med.* 228.

14. Caron, A., *Hygiene for Newborn Infants, Considered in Relation to their Physical and Moral Development*.—Gaz. des Hôp. 142. 144.
15. Chabrely, B., *on Hygiene of Infants in their Earliest Age*.—Jour. de Bord. Nov.
16. Patron, August, *De l'allaitement maternel*. Paris. Thèse. pp. 34. (*On Maternal Lactation*.)
17. Besser, Leopold, *Den Deutschen Müttern und Vätern ein Buch über das Werden und Wachsen ihrer Kinder als Schlüssel zu deren Gesünderer Erziehung*. Frankfurt a. M., 1858. pp. 344. (*A Book for German Mothers and Fathers, on the Formation and Growth of Children, being a Key to their Sound Education*.)
18. Gauneau, J., *Education Physique et Morale des Nouveau-Nés, Suivi de l'Importance de l'Allaitement pour la Mère*. Paris, 1858. pp. 106. (*On Physical and Moral Education of Newborn Children, with an Appendix on the Importance of Nursing to the Mother*.)
19. Hufeland, Chr. W., *Guter Rath an Mütter über die Wichtigsten Punkte der Physischen Erziehung der Kinder in den Ersten Jahren. Nebst einem Unterrichte für Junge Eheleute, die Vorsorge für Ungeborne betreffend*. Leipzig, 1858. pp. 257. (*Advice to Mothers on the most Important Points in the Physical Education of Children in the First Years of Life. With instructions to young couples on the care of the Unborn*.)
20. Plath, Wilhelm, *Briefe eines Arztes an eine Junge Mutter*. Hamburg, 1858. pp. 308. (*Letters of a Physician to a Young Mother*.)
21. Déclat, G., *Hygiène des Enfants Nouveau-Nés*. Paris, 1858–1859. pp. 316. (*Hygiene of new-born children*.)
22. Schreber, D. G. M., *Kallipaëdie, oder Erziehung zur Schönheit, etc., Mit 72 Abbildungen*. Leipzig, 1858. pp. 309. (*Kallipaëdia, or Development of Human Beauty by Education, etc.*)
23. Schöpf-Merei, A., and Whitehead, J., *Second Report on the Hospital for Diseases of Children at Manchester*.—Jour. f. Kinderkr. 9, 10.
24. *The Murder of the Innocents*.—Lancet. May.
25. London Hospital, *Returns of Patients under Seven Years of Age in the Children's Ward during the Year 1857*.—Lancet. April.
26. Helfft, *on the Mortality during the First Year of Life, of Children Born Alive at Berlin*.—Monatsbl. f. med. Statistik. 2.
27. Raedell, C., *Contributions to the Statistics of Newborn Children at Berlin*.—Ibid. 9.
28. Husemann, Th., *Contributions to the Medical Statistics of the Principality of Lippe*.—Ibid. 1.
29. Scherzer, C., *Medical Notes*.—Wiener Zeitschrift. 45.
30. Moore, W., *Contributions to Infantile Pathology*.—Dubl. Hosp. Gaz. Aug. 15—Journal f. Kinderkr.
31. Stendel, H. and Gärtner, O., *Second Report on the Jatrogymnastic Institution at Stuttgart*.—Journal f. Kinderkr. 1, 2.

32. Hauner, *Report on the Eleventh Year of the Dispensary Connected with the Children's Hospital at Munich.*—Ibid. 7, 8.
33. Faye, F. C., *The Children's Hospital at Christiania in the years 1855–1857.*—Ibid. 7, 8.
34. Löscher, *Jahresbericht des Franz Joseph Kinderspitals in Prag, vom Jahre 1857.* (*Annual Report on the Francis Joseph Children's Hospital of Prague, for the year 1857.*)
35. *The Hospital for Sick Children.*—Brit. Rev. Jan.
36. *Reports of Continental Children's Hospitals.*—Edin. Med. Jour. March.
37. Herrnhilfe zu Wildbad, *Filial der Kinderheilanstalt zu Ludwigsburg, zur Verpflegung Badebedürftiger Kinder; der 4. Sommer daselbst.* Ludwigsburg. pp. 20. (*Herrenhilfe at Wildbad, Branch of the Children's Hospital at Ludwigsburg; for the Purpose of Taking Care of Children Needing Baths; the 4th Summer.*)
38. Dissauer, *The Children's Hospital at Graz.*—Jahrb. f. Kind. 4.
39. *Foundling and Medical Institutions for Children at Vienna.*—Ibid.
40. Schreber, M., *on the Therapeutical Use of Sun-Baths, particularly in certain Chronic Diseases of the Infantile Age.*—Ibid. 3.
41. Schuller, *on the Abuse of Syr. Diacod. in Diseases of Infants.*—Wiener Zeitschrift. 50.
42. Joachim, W., *on the Use of the Laudanum in Diseases of Infants.*—Ungar. Zeitschr. 32.
43. Pollard, Th., *Use of Opium in Children.*—Atlanta Jour. Nov.
44. Meigs, J. F., *on Semiotics and the Examination of Sick Children.*—Jour. f. Kinderkr. 2.
45. Politzer, L., *Critical Review of some Opinions on Infantile Pathology and Therapeutics.*—Wien. Med. Wochenschrift. 47. Oesterr. Zeitschr. f. Prakt. Heilk. 46.
46. Schauenstein and Späth, *on the Transition of Medicines from the Circulation of Pregnant and Nursing Women into Milk, Amniotic Liquor and Fœtus.*—Jahrbuch f. Kinderkr. II. 1.
47. Ploss, H., *on the Causes of Sexual Difference in Infants.*—Monatsschrift f. Geburtsk. May. Pamphlet.
48. Jacobi, A., *Report on the Progress of Infantile Pathology and Therapeutics.*—N. Y. Jour. Jan., March, May, July, Nov.
49. Jacobi, *a Critical Examination of all the Recent Works relating to Infantile Pathology and Therapeutics.*—N. Y. Jour. Nov.
50. Thomson, J. B., *on the Comparative Influence of the Male and Female Parent upon the Progeny.*—Ed. Med. Jour. Dec.
51. Edgren, *Swallowing Needles.*—Jour. f. Kinderkr. 3, 4.
52. Silvester, H. A., *a Contribution to the Science of Teratology.*—Med.-chir. Trans. XIII.
53. Kuhn, *on the Origin of Monstres per defectum.*—Bull. de l'Ac. XXIII. Sept.

54. Joseph, on *Double Malformation*.—Abhand. d. schles. Ges. XXXV.
55. De Garzia, A., *Contributions to the History of Malformations*.—El Siglo Med. 255.
56. Schmidt, J. B., *Congenital Malformations among 839 births in the Clinique of Prof. Scanzoni*.—Scanz. Beitr. III.
57. Schultze, B., *Cases of Malformations*.—Schmidt's Jahrb. Nov.
58. Martini, on *Surgical Treatment of Congenital Malformations; Atresia ani; Obliteratio Ilei; Spina Bifida*.—Ibid.
59. Budd, Ch. A., *a Case of Unusually Large Development of the Human Fœtus*.—Am. Monthly. March.
60. Ramis and Breslau, *a rare Case of Double Malformation Xiphodymia*.—Bayer. ärztl. Intellig.
61. Geoffroy St. Hilaire, *Monster; Xiphodyme*.—Gaz. Hebdom. 4.
62. Girard, on *a Monster, Xiphodyme*.—Un. Méd. 136.
63. Johnson, S. P., *a Curious Monstrosity*.—Virg. Med. Jour. Nov.
64. Jackson, J. B. S., *Two Fœtuses United, Face to Face, from the Umbilicus to the Upper Third of the Sternum*.—Bost. Med. Jour. May, 14.

Of the manuals of Dr. HENNIG, Prof. CONDIE, and Prof. MEIGS new editions have been published; the introductory chapter to the work of the last writer, on clinical examination of children, has been translated into the German language, and printed in the "*Journ. für Kinderkrankheiten*." It is of a similar scientific value, and practical importance to that exhibited by Dr. Mayr, of Vienna, in his article on examination of sick infants, in which the semiotical signs taken from forehead and physiognomy are treated of. We regret to state that a new manual on diseases of children, has also appeared and swelled the number of those already in existence; we regret it, because an inclination to collect, destroys or lessens the tendency to produce. We may confidently assert that the larger the number of manuals issued, the greater the dearth of new facts and real scientific discoveries; at all events, it is true, that a small monograph or a short, but original article in a medical journal, is to be valued higher than a large manual destitute of new facts and the most recent discoveries like that of Dr. TANNER. We regret that it is our duty to notice a book, which does not at all meet the demands of the time in and for which it has been written. We the more regret it, because we have completely to disagree with a highly favorable report in the *Edinburgh Jour. of Medicine* (Aug.), the reports and reviews of which we have always been accustomed to hold in great esteem. We feel, however, very willing to acknowledge everything that is praiseworthy, and therefore we heartily, with the *Edin. Jour.*, give Dr. T. credit for limiting excessive bloodletting in infantile diseases; but we deny him the originality in these views which the *Edin. Jour.* claims for Dr. T., and which Dr. T. claims for himself. The same remarks which the *Edin. Jour.* is at the pains of reprinting, may be found just as well expressed in any good manual on diseases of chil-

dren, and much better, we think, in Dr. John B. Beck's *Essays on Infant Therapeutics* (New York, 1855, pp. 82-100).

A commendable feature of the work is the large number of subjects treated of, as but very few of the many manuals on diseases of children are complete. This deficiency is a great defect in a book designed to give full information on any subject that may occur in practice, and is not only found in our own American manuals, by Meigs, Dewees, and Bedford, but in those also by West, and even Rilliet and Barthez; this latter work should rather be considered a collection of most excellent monographs, than as a complete manual. While thus acknowledging the completeness of Dr. Tanner's book as regards the range of subjects considered, we have to confess that there is scarcely one article in the whole collection agreeing with the results of modern science in general, and of pædiatrics in particular. We shall cite only a few examples, from which our readers may draw their own conclusions. Atelectasis pulmonum (p. 308) has no other cause attributed to it by the author than bronchitis. In his opinion, pleurisy in children (p. 305) is most frequently produced by the extension of the inflammatory action in pneumonia, while it may be considered as certain, that the most obstinate and fatal cases of pleurisy very frequently are not even combined with pneumonia. Again our author asserts that laryngitis, pneumonia, and pleurisy are not unfrequent, while bronchitis and croup are perhaps, of all the severe affections of childhood, those which are most commonly met with, when, in fact every practitioner is accustomed to meet with many cases of bronchitis and pneumonia to a single case, except during a severe epidemic, of genuine croup. And it is well known that pleurisy and pneumonia do not rank equally as to the frequency of their occurrence. In the opinion of Dr. T. again, "Croup is most common perhaps during the second year of life," (p. 282), and where he is enumerating (p. 284) the indications and contra-indications of tracheotomy, he says: "The practice of auscultation in the second and third stages, yields information as to the amount of air entering the lungs, and the extension or not of the inflammation to the bronchial tubes and lungs." These assertions are by no means true, not even approximatively. The first one may readily be refuted by statistics which constantly prove, that (primary and secondary croup taken together) croup is less frequent in the first two years of life, than in the period from two to five years. Further, whoever has attentively observed the stages of croup, is well conversant with the fact, that in almost all cases it is more than difficult, even impossible, to learn the state of the lungs, because no pulmonary sound can be perceived on account of the overwhelming noise in the larynx. What, again, are we to say of the symptomatological accuracy of a writer, who calls (p. 223) "a continued contagious fever, accompanied by an eruption, and frequently attended with inflammation of the mucous membrane of the respiratory organs," the distinguishing character of measles? Or what of his nomenclature, when with him (p. 230), "simple or infantile, or remittent, or more correctly, typhoid fever" are synonyms? What estimate shall we place upon the scientific attainments of an author who, in a book written for the infor-

mation of others, has only the following to say on typhus in children : "Typhus is, I *believe*, contagious?" or of his knowledge of pathology, who ventures to call infantile intermittent fever "a rare disease in children under five years of age?" or of his physiological learning, when amongst the four general effects of abstraction of blood from the system the first is said to be the diminution of the quantity of blood, and another, the weakening of the heart's action?

We must add, that we can but find fault with a sentence like the following (p. 304): "Either the inflammation terminates in resolution and complete recovery, or the roughened surfaces become adherent, or they are separated by the effusion of serum, and a kind of dropsy results, known as hydrothorax"—in which the terms are as badly selected as the pathology is incomplete or false. Moreover, we desire to state, that the general opinion expressed on diseases of childhood is not fully according to truth. For example, the author states (p. 20), that, "the maladies of this time of life are severe and insidious in their nature, soon give rise to organic change, and run their course with a rapidity not seen in the adult." This is true, but the contrary is equally true; that the maladies of childhood, severe and insidious though they appear to be, do not give rise to organic change, but yield readily to health and cheerfulness. Such is the action of the nervous system, and the rapidity of metamorphosis in the organism of children, that sometimes an extremely doubtful prognosis is refuted by an unexpectedly speedy recovery, and *vice versa*. A practitioner yielding to the impression communicated by the above quotation from Dr. Tanner's work, would be liable to many mistakes in his estimation of the importance of apparently dangerous symptoms.

We have not space to extend our criticism, and will merely add that the author has, by no means, given to individual subjects the space and consideration which they deserve. We have spoken of atelectasis pulmonum, so prominent a feature in the investigations and studies of European writers, which is dispatched in a few lines. Tuberculosis occupies only two pages; scrofula only three and a half; syphilis only one and a half, while the symptomatology of this latter important disease is more defective and inaccurate than almost anything in the whole book. Finally, we have to state, that the extracts given above are taken at random; they are not a few points selected after a careful reading, but they were generally found on the first page wherever we happened to open the volume.

After the *Journal für Kinderkrankheiten* (*Journal for Infantile Diseases*), edited by Drs. Fr. Behrend, and A. Hildebrand, and published at Erlangen, had been existing for thirteen years, Dr. Kraus, of Vienna, undertook to publish, also in twelve yearly numbers, the *Oesterreichische Zeitschrift für Kinderheilkunde* (*Austrian Journal for Infantile Pathology*). When he was, by his private business, no longer able to attend to its publication, it ceased to appear after two years had elapsed, Sept., 1857. Drs. Fr. Mayr, L. M. Politzer, and M. Schuller, have since stepped in to fill the void, with the *Annual for Infantile Pathology and Physical Education*, six numbers of which have since appeared. While no other country has a single journal



for the specialty in question, Germany can boast of two journals devoted to infantile pathology, both of which have alike able contributors, and a large number of friends and readers. The contents of the *Annual* are composed of original contributions, miscellanies from general medical literature, and critical reviews. The first are most valuable. As instances, we name Prof. Clar's essay on the pathology and therapeutics of some of the most important disease of the infantile intestinum crassum; Dr. Vogel's contributions to the physical exploration of the lungs in young infants; Dr. Mayr's articles on the examination and semiotics of sick children; Dr. Herman Zeissl's essay on congenital syphilis of new-born infants and nurslings; Dr. Bokai's article on retropharyngeal abscesses in children; Dr. Politzer's treatise on scientific dietetics and physical education; and Drs. Fricdinger's, Mayr's, and Zeissl's essay on syphilides of the infantile age. The care and industry given to each of the six numbers which have hitherto appeared, has been the very same from the beginning to the end. The editors cannot but win by their labors the thanks of the profession and a good reputation for themselves.

DR. CUMMING'S articles "on a substitute for human milk," and "on natural and artificial lactation," are as able as they are earnest. A few of his statements will be deemed sufficient to prove this assertion! An infant three months old will take from forty-eight to sixty-four fluid ounces daily, in six or eight half-pint doses. During the first year, therefore, he will take from 1000 to 1300 pounds, in which the weight of butter is 27 pounds, casein 18.5, sugar 97.5, water 1157, salts 2.1 pounds; of these latter, 12 ounces are phosphate of lime. It thus appears, that during the first year, the child receives from 110 to 143 pounds of dry solids. He may thus readily gain 15 or 20 pounds in weight, implying less than three pounds of dry solids, and yet have a large residue to be expended in the production of heat, and in the activity of an energetic vitality. A child thus nourished, can make teeth and bone without difficulty. A woman in fully nourishing her child, must furnish as much milk in proportion to her weight as a good cow; a woman weighing 130 pounds, will give daily 4 pounds of milk, containing about 5 ounces of dry solids; the cow weighing six times as much, will give 6 times as much, containing 30 ounces of the same. In an ordinary parturition, a woman loses not more than 20 pounds, containing less than 3 pounds of dry solids; this amount furnished in nine months, is at the rate of 4 pounds a year. Many women fail to furnish fully even this small amount; the infant at birth being small and meagre, looking like a starveling. If unable to furnish this small amount, how can a mother be expected to furnish 30 times as much?

Cow's milk contains.	{	Butter, 38.59	{	Human milk contains.	{	Butter, 20.76
		Casein, 40.75				Casein, 14.34
		Sugar, 53.97				Sugar, 75.02
		Water, 866.69				Water, 889.88

It is thus evident, that by no mode of dilution, can ordinary cow's milk be made a substitute for human. There will be in every case an excess of casein, or a deficiency of butter. As long as the butter is to the casein as 100 to 115, instead of 100 to 70, so long must

dilution fail to adapt it to the wants of the child. But if this original proportion could be changed to that existing in human milk, we might have hope of success. If we leave at rest for four or five hours ordinary cow's milk, and then remove and examine the upper third, we find in it 50 per cent. more butter than it at first contained. In round numbers, its butter is no longer to its casein as 100 to 105, but as 150 to 105, or as 100 to 70. If then, by dilution of this milk, we reduce the butter to 20.76, we have 14.34 of casein, as in human milk. Another mode of obtaining the same result, is by using the latter half of the milk furnished by the cow. The former half contains 22.18 of butter to 41.63 of casein, while the latter half has 54 of butter to 38 of casein; here again the right proportion exists. The actual composition of this latter half, is butter 54, casein 38, sugar 53, water 855. By adding sugar 142, and water 1458, we have butter 54, casein 38, sugar 195, and water 2313, or in proportion butter 20.77, casein 14.61, sugar 75, and water 889.62; the difference from human milk is unworthy of notice.

To imitate colostrum, we must, during the first month of the child's life, use milk, containing from 75 to 80 thousandth of butter, or from 94 to 107 per cent. more than the ordinary milk of the cow. This rich milk may be obtained, by taking the upper eighth instead of the upper third of milk left to repose for four or five hours. It may be also obtained by using the last tenth of the milk furnished by the cow.

For a child from 3 to 10 days old.	Milk 1000.	Water 2643	Sugar 243
" 10 to 30 "	"	" 2500	" 225
" 1 month old.	"	" 2250	" 204
" 2 months old.	"	" 1850	" 172
" 3	"	" 1500	" 144
" 4	"	" 1250	" 124
" 5	"	" 1000	" 104
" 6	"	" 875	" 94
" 7	"	" 750	" 84
" 9	"	" 675	" 78
" 11	"	" 625	" 73
" 14	"	" 550	" 67
" 18	"	" 500	" 63

In general, it is better to begin with milk more diluted than the age and development would seem to indicate, and then gradually increase its strength. It is better that the food should be insufficient than that it should be indigestible. A child ten days old will take about 32 ounces daily in eight four-ounce doses; the doses will increase in size and somewhat diminish in number, so that at 3 months seven eight-ounce doses are usually taken. The milk should be given at regular intervals; the child should be trained to pass six or eight hours at night without feeding. The temperature should be from 100° to 104°; ten or fifteen minutes ought to be given to each dose. This food thus administered, may well be styled *artificial human milk*.

DR. POLITZER tries to find a scientific basis of infantile dietetics, by investigating into the peculiarities of the metamorphosis of the substances of the infantile organism, and the proportion of gain and

loss, by exploring the exact nature and faculties of the digestive organs, and of the food most in use for children. In his opinion, metamorphosis of substance in the infantile organism, is particularly modified by the incompleteness of the body, and the chemical and physical difference produced thereby of infantile organs in proportion to those of adults. The osseous system, muscles, and skin, are most apt to show such a difference. There is another species of glue—cartilaginous glue—and less lime in the infantile bones than in those of adults, but more chloret. sodii, this having a greater affinity to the glue of cartilages; infantile muscles contain more albumen, less fibrin, and assimilate from the blood a larger amount of salts of potassa and magnesia than of lime; this forming no larger part of the muscles, until a more powerful respiration, and a greater amount of oxygen in the blood favors the formation of fibrin. The skin, too, contains more albumen than in adults. Respiration is accelerated and less energetic, sleep of longer duration; according to the results of physiological science, therefore, less carbonic acid is exhaled, less urea excreted. Motions of the body are but few, mental activity inconsiderable. In the circulation, there are also some peculiarities, the heart being less powerful, and the “aspiring” effect, of feebler inspirations on the venous blood less considerable. Nor has the relative inactivity of infantile muscles much effect on general metamorphosis. Milk undoubtedly changes the ratio of its elements according to the period of nursing, but not at all in such a degree as albuminous, fatty, and saline elements are changed in the food of adults. Finally, digestion, resorption, the size and influence of the liver, are of peculiar importance in the infantile organism. The practical consequences of the foregoing facts are easily understood; the assimilation of food will have more than only to restore the loss; it ought to be as digestible as its amount sufficient; proteinates ought to outweigh fats; lime, potassa, phosphates, are required in large quantities, and the food ought to be equable and appropriate to the age.

The further expositions of the author contain a full review of the physiology of the digestive organs, as applied to the infantile age. The organs of mastication, the stomach, intestines, liver, spleen, and pancreas, are treated of; the digestive power of the infantile saliva, gastric, pancreatic and intestinal juice, and of the bile, further the digestion of amylacea and carbonhydrates, of proteinates, of fats, and finally, the process of resorption of the digested masses, are scientifically examined. Thus the physiological knowledge of infantile digestion, we dare say, is materially improved by the accurate and ingenious essay of the author.

DR. ROUTH arrives at the following conclusions as to the diet of children:—1. The analogy of comparative anatomy of a child's alimentary canal, indicates that its food should be animal. 2. The child should not be weaned, if it can be avoided, before the 8th month. At this period it may be allowed to give vegetable food, but animal is better. 3. The vegetable aliment selected should contain chloride of potassium and phosphoric acid among its mineral ingredients, and a due proportion of plastic as compared with calorifiant matters;

excess of starch being very difficult of digestion. 4. If pap be given, it should be made with milk, so as to include fat and chloride of potassium in the compound, and not given in large quantities; above all, it should not be made with white, town-made bread, which contains alum, and is nothing better than a slow poison. He expresses the opinion that, amongst the vegetable substances, that which comes closest to milk in its composition is, without doubt, lentil powder, or, as it is called for the purpose of obtaining a better sale, *Revalenta Arabica*, containing both phosphoric acid in abundance, and chloride of potassium; it also includes casein, the same principle which is found in milk in its constituent parts. Moreover, its nutritive matter is to its calorifiant matters in the proportion of 1 to  $2\frac{1}{2}$ , milk being in that of 1 to 2.

DR. PATRON gives but a compilation of what is generally known on nursing, its utility to mother and child, its troubles and difficulties, its duration, on weaning, and on the diet of the newly-born.

Generally, the majority of books on dietetics of infants do not form a part of the library of medical practitioners, who usually have neither time nor inclination to read whatever is written for the public. Now, we do not contend that all the numerous books published on this subject ought to be read by the profession, for the purpose of increasing their medical knowledge; for an exact acquaintance with physiological facts enables the medical man to draw his conclusions for himself. But there is a good reason why every physician should read as many popular books on infantile dietetics as possible. It is only natural that the public should, in their selection of books written on a medical subject, mostly depend upon the judgment of their medical advisers; in this case, the physician is placed in the most favorable and agreeable position; he has not then to cure diseases, but to prevent them; not to act as doctor, but as medical friend and protector. Every educated physician has no difficulty in deciding what kind, and what amount of instruction may be safely recommended in the individual case; but the very fact, that the kind of instruction has to vary with education, position in life, and talent, should induce physicians to read as many popular works on dietetics as possible. What is most important is, that no works be selected in which anything is given not based upon incontestable scientific results; as nothing is more apt to confuse the mind than discussions on scientific subjects not wholly decided upon. Whatever, then, is laid before the unprofessional public ought to be perfectly clear and intelligible. Therefore, everything relating to pathological changes, and the cure of diseases, should not be a part of the work we refer to; when they are given, they are more than unnecessary, they are positively injurious, because subjects requiring years, to be thoroughly comprehended by the student and physician, will certainly not be readily understood by the popular mind. These preliminary observations are rendered necessary for the purpose of applying a uniform standard to the works under consideration.

DR. BESSER has, after having obtained a good reputation, a few years ago, by a small pamphlet on the importance of the first days of

infantile life for the education of infants, come before the public with a book, which cannot fail to place the author in the first rank among popular writers. His purpose is not only to give a number of remarks and prescriptions on physical and mental education of children, but to make parents understand why they are given. His expositions of generation, embryology, pregnancy, and parturition, belong to the best we have ever seen published for the use of the public at large. This book is more deserving of being translated for the benefit of our country, than any with which we are acquainted.

DR. GAUNEAU's book treats of the usual subjects of a work of this character : such as food, air, temperature, light, exercise, bathing, dress, dentition, weaning, etc. Good though a part of the articles be, and although we do not desire to detract in the least from their value, it is impossible for us to agree with the author in all his premises. Among the opinions and doctrines which we could not approve, are the following : Digestion is said to be more active during sleep, while physiology is teaching the contrary. The infant ought to take the breast, according to our author, every hour, or at least every two hours during the first four or five days, "as long as the milk fever lasts, and weaning never ought to take place, in common cases, before 16 or 18 teeth are cut, at 22 or 24 months of age ; and in no case to be allowed before the age of 13 or 14 months." We can no more subscribe to this than to Dr. G.'s assertion, that generally cerebral symptoms and mania occurring during the puerperium, indurations of the breast, degenerating into cancer, sterility, leucorrhœa, etc., are the consequences of mothers not nursing their infants themselves ; the author not even undertaking to show a physiological or pathological connection, as between cause and effect. Finally, sentences like the following do not read well in a medical work : "At the same time that physical and moral strength are being developed, the organs, too, develop themselves" (p. 73). The author does not appear to be entirely convinced of his own "convictions," because there is a striking contradiction between the following important sentences : "The moral education of the infant begins with its birth" (p. 41), and "the infant cannot have habits at this early age, its life being too active ; every day new sensations are impressed upon its brain, and the preceding ones are forgotten" (p. 65). Nevertheless, there are some good views, especially in the chapter on moral education, which we sincerely wish every mother to know, and the perusal of which has given us a great deal of pleasure.

Dr. PLATH's book contains simple and unassuming expositions on the dietetics of pregnancy and infancy, presented in an easy, simple, and modest manner. The method is somewhat different from that generally followed, the author preferring to expound the matter in a series of fifty-five letters addressed to a newly married lady. Although not all of his opinions and directions may be agreed upon—the author thinks dentition facilitated by some accompanying eruption, considers the removal of *crusta lactea* to be absolutely dangerous, directs cold in convulsions to be principally applied to the fore-

head, etc.—we cannot but highly recommend as well the abundance of matter contained in this little book, as the manner in which it has been written.

Of Prof. HUFELAND'S "Advice to Mothers," the eighth edition has appeared.

Dr. HAUSCHILD is not a physician, but a well educated physiologist and, moreover, an enthusiastic friend of the subject he is writing on. His book is written on the principle, that the cure of sick children is naturally the physician's business, but that the care of healthy children and the prevention of diseases is a duty belonging to physicians, parents, and teachers, in an equal manner. The work being published for the use of parents and teachers principally, no new facts are developed, no physiological theories examined or illustrated; only well established truths are exposed in a clear, simple way, and in such a manner as confers honor on the author for his anatomical and physiological learning, and for his knowledge of the scientific horizon of the public. Some of his views, for instance, on the pathological importance of dentition, and of worms in the intestinal canal, give testimony of such a ripe physiological and pathological judgment, as we but too often look for in vain, even in physicians. We have no doubt that if many voices like Dr. Hauschild's will be able to make themselves heard and understood, the knowledge of infantile dietetics will make a rapid progress among the public, and anthropology applied to the infantile organism will be estimated as a popular study in all the classes of the people.

Dr. DECLAT'S work treats of the fœtus after the seventh month of pregnancy and the infant at the breast; the author considering the period of weaning to be but the commencing, for the infant, of a truly independent existence, the infant being a part of the maternal organism, as long as it depends on the mother for its food. In seven chapters the author treats of the mother before her confinement, of the infant and the selection of a nurse; of the birth of the infant; of nursing; of general rules; of weaning; of the most frequent indispositions, diseases and accidents during the period of nursing and after weaning, and of vaccination. He emphatically states that his book purports to be but a guide in the hands of mothers, to the end of preventing diseases and saving life; nevertheless he thinks proper to enlighten "his professional brethren only," with his views on the diagnosis and treatment of croup, which is a disease the author, we are sure, will hardly have observed at the early age in question. The diagnosis of croup is rendered certain, in the author's opinion, by merely inspecting the fauces, pseudo-croup showing scarcely a slight redness of the mucous membrane, and croup exhibiting false membranes. This is untrue even in France, where diphtheritic croup is most frequent; the author himself reporting a case where no false membranes were seen in the fauces. His treatment consists of the frequent administration of emetics (tart. em. with ipec.), and of bicarb. sod. or chlor. pot.; and if the disease will progress, respiration become more sibilant, and aphonia ensue, of performing tracheotomy. He objects to cauterization of the fauces and larynx, for a pretty curious reason; not proving, but stating as his "conviction,"

that it will aggravate the disease, produce "a terrible inflammation," and often kill at once. The chapter on indispositions, diseases and accidents of infants and mothers contains only a few other subjects besides croup, viz.: diarrhœa, excoriations of the nipple, burns, cuts, falls and muguet. Finally, to wind up with our general opinion on this new book on dietetics of infants, we dare say that we have never had the opportunity to read a more eloquent and enthusiastic eulogium on the Queen of Spain, to whom the work is dedicated, "wise and vast genius in governing nations," and her "womanly loving heart, which derives from her inspiration the true rays of divinity, the tenderness and care for her children," and on her being "Queen both by blood and by love;" but that the book fulfills but incompletely the promises pronounced in the introduction, contains nothing new, and omits a great deal.

Dr. SCHREBER is well known to the European profession as a writer on both the general pathology and the dietetics, particularly gymnastical exercises of children. His new book is a complete review of all the means, both physical and psychical, by which the infant may be educated from birth to the adult age; by which its body will be strengthened, its understanding enlightened, its knowledge increased, its temper corrected, and manners and habits formed. The author is well aware that education will have to vary in every single case, every individual's natural disposition and faculties differing from those of another; but that the rates of education are the same for every human being, and have to be applied to individual cases. We feel a great satisfaction in meeting at last a physician writing on infantile matters, who is at the same time a good psychologist and pedagogue; as it is but too true, that writers on psychical and moral education of children have seldom been physiologists, while physicians who tried to teach dietetics and bodily development, have seldom directed their attention to psychology. Dr. Schreber's book is divided into four principal parts, the first of which treats of the first year of life, the "sucking age;" the second, of the period from the second to the seventh year, "playing age;" the third, of the period from the eighth to the sixteenth year, the "learning age;" the last period comprehends from the seventeenth to the twentieth year. Each of the corresponding treatises comprehends the author's views and remarks on and rules for both bodily and mental development; and the chapters on food, air, baths, sleep, motion, gymnastic exercises, dressing, attitude, habits, cultivation of single parts of the body; further, those on playing, on the relations of the child to its nurse, to other children, to parents, teachers, and strangers, and on cultivation of the character, belong, we dare say, to the best we have ever known to be laid down in a book, proving the author to be both a learned and a thinking gentleman. The diction is, in the average, clear and plain, but some parts of the book, by their theoretical reasoning and by a diction tasting somewhat of passed by periods of German philosophy, will undoubtedly be fully appreciated and relished but by well-educated readers. Thus the author's work will be more found in the hands of the better classes, of reasoning parents



and teachers, than of the large majority of the people, who want to be instructed easily, plainly, quickly, and cheaply.

Schöpf Mercet's and Whitehead's report treats of 1,548 sick children attended during 21 months; its most interesting feature are the notes on the patients' mothers, residences and alimentation. On 722 children, of from 9 months to 3 years of age, whose nutrition and bodily development was accurately recorded, the following facts were obtained :

	The bodily development was		
	good.	middling.	bad.
I.—120 children were nursed by their mothers alone, without any artificial food, for 9 months or longer.	In 71 (60 p.c.)	31 (25 p.c.)	18 (14½ p.c.)
II.—68 were nursed by their mothers from 6 to 9 months exclusively, and were afterwards partially fed with milk and bread, etc.	35 (51 p.c.)	20 (30 p.c.)	13 (19 p.c.)
III.—216 were not exclusively nursed by their mothers, but had artificial food intermixed from a very early date.	110 (51 p.c.)	54 (25 p.c.)	52 (24 p.c.)
IV.—278 were more nourished by artificial food than by breast-milk.	80 (28 p.c.)	73 (26 p.c.)	125 (45 p.c.)
V.—40 were not at all nursed by their mothers, or for a very short time only.	4 (10 p.c.)	10 (25 p.c.)	26 (65 p.c.)

Of 1,548 sick children, 249 were suffering from troubles of the digestive functions, 116 from atrophy, 256 from weakness, 74 from rachitis, that is to say, 696 suffered in consequence of vicious alimentation; 93 died of this number. Of the whole number of 1,545, 117 died; 12 of them were from 3 to 14 years old; 105 under 3 years; 96 under 2 years; 47 under a year; 29 under 6 months.

Of 186 sick children under 6 months, died	29	{	12½ p. c.
" 195 " from 6 to 12 "	18		
" 345 " " 1—2 years, "	49	{	14½ p. c.
" 220 " " 2—3 " "	9		
" 602 " " 3—13 " "	12	{	2 p. c.
1,545	117		

Two papers, read by Dr. ROUTH before the Medical Society of London, furnish the following statistics: The mortality amongst young children during one year, in Manchester, amounted to 55.4 p. c.; the corresponding figures for London being 40.2, for Leeds 52, and for Birmingham 50 p. c. in the same year.

In 1857, there died in London 363 children from "want of breast-milk;" and in seven years (from 1848 to '54) the number of deaths in all England due to this cause, increased from 393 to 842. Amongst the main causes of the large number of deaths occurring among young children, Dr. Routh counts the injurious excess to which wet-nurses are employed, even such as are by no means able to nurse, and the bad quality of the milk, the sale of which ought to be regulated by the law.

The returns of young patients of the London Hospital are of no statistical importance, because the 214 cases are only those of accident and diseases of the more urgent character.



The proportion of children dying under 1 year, to the whole number of the population of Berlin, according to DR. HELFFT, was in

1849.....	1 : 155.16
1852.....	1 : 139.62
1855.....	1 : 140.72

Of the children who died in the first year, 3.11 per cent. died within the first twenty-four hours ; 23.75 from the second day to the end of the first month ; 12.01 in the second month ; 10.03 in the third ; 9.47 in the fourth ; 6.91 in the fifth ; 6.87 in the sixth ; 5.87 in the seventh ; 5.32 in the eighth ; 4.48 in the ninth ; 4.18 in the tenth ; 4.05 in the eleventh ; 4.00 in the twelfth. Hence, the probability of life is increasing monthly, even daily. As a general rule, August was the most pernicious month at every age.

Dr. RÆDELL reports some statistical facts on the new-born children of Berlin, taken from the records of the years 1846-1855. The proportion of males to females is 1.0772 : 1. Of 23 new-born boys, 1 is still-born ; of 25 girls, 1 ; of new-born infants in general, 1 is still-born out of 25. The temperature appears to have a great influence upon the sex of infants. The higher the average yearly temperature at the time of conception, the larger is the proportion of males to females. Conception in Spring is more favorable to the female sex, conception in Fall to the male. Temperature, finally, is not only of some influence upon the sex, but on the chances of living after birth also ; a high average temperature at the time of conception (not of birth), appearing to augment such chances.

Dr. HUSEMANN'S accurate statistics are of great value. He shows, that of newly born children, in the principality of Lippe, from 3.3 to 4.27 per cent. die in the first six weeks after birth. Of the children, born alive, 15.54 per cent. will die under two years of age (in Belgium 29 per cent. according to Quetelet's reports) ; of the whole number of deaths 21.6 per cent. occur at this age. It is to be noticed as a remarkable fact at once, that this rate of mortality has been about equal for the last seventy years. Of the whole number of deaths 9.1 per cent. occur from 2 to 5 years of age ; 5.12 per cent. from 5 to 10 years. This proportion was much more unfavorable in the periods of 1788-1807 (7.5 per cent.), and of 1808-1822 (5.7 per cent.), before and after the first introduction of vaccination. Of the whole number of deaths, 5 per cent. occur at the age of from 10 to 20 years.

Dr. SCHERZER states, that the mortality of children in China, is at least as high as in Europe, perhaps even larger. Variola and tetanus, dysentery and cholera, are frequent and very dangerous. Many cases of intermittent fever came under observation in the age of from 8 to 20 years.

According to the Report of the Hospital for sick children, Ormond Street, 1857 ; of the whole number of children of the better classes in England, from 25 to 30 per cent. die in the first ten years of life, of the lower classes from 30 to 40 per cent., and as many as 60 or 70 per cent. under peculiar epidemical influences. Mortality among children at London, is but 2 per cent. less than fifty years ago. Of 50,000 deaths in London, 21,000 die under 10 years of age ; in the

eight largest cities of Scotland, of the whole number of deaths 46.5 per cent. occur in the first five years of life. In Ireland, 18 per cent. of the deaths occurred under five years of age, less in the country (in some counties 14 per cent. only), more in the cities; thus in Galway, 20; in Dublin, 20.2; Kilkenny, 20.3; Waterford, 21.5; Limerick, 22.1; Belfast, 22.7; Cork, 23.5; and Drogheda, 25.5 per cent. In France, of 100 newly born children, 20 males and 16 females will die in the first year, that is to say, a fifth part of the males, and a sixth of the females. In some of the English colonies, the rate of mortality is highly unfavorable; during the summer, at Melbourne, there are scarcely more births than deaths, in the course of six months, in 1853, the number of deaths was even twice as large as of births; in 1857 there were 70 deaths in children under a year, to 100 newly born children.

Some of the facts observed by Dr. HAUNER are exceedingly interesting. For the months of September and October, 1856, a similar weather and a like temperature prevailed; nevertheless bronchial affections were numerous, and very much so, in the course of October only. The temperature of October, 1857, was very much like that in 1856, but bronchial affections were very rare occurrences. Hooping cough was influenced, in 1857, neither by season nor by temperature; typhoid fever occurred in the same monthly number during the whole year, December excepted, where no case occurred. In February and March, without any particular changes in the atmosphere being observed, inflammations of the parotis were very frequent. Acute exanthems occurred in every month; and infantile cholera and slight dysenteries were observed as well in December as July. Dr. Hauner's therapeutical remarks are accurate, but naturally do not contain much that is new. Hooping cough was treated more successfully, than by any other class of remedies, by narcotics, morph., aq. lauroc., extr. bellad., and in later stages by chin., lich. island. Diseases of the liver were sometimes found in post-mortem examinations, where they were very little thought of; fat and nutmeg-liver were the most frequent anomalies found, particularly in rachitical children suffering from dyspepsia and intestinal catarrhs. Dysuria was met with several times; in the majority of cases, the cause originated from the influence of cold, some of superabundance of uric acid. Incontinence of urine was observed in a boy of five years; the disease depended on weakness of the neck of the bladder, and was successfully treated by appropriate diet and posture, local application of cold, and cold hip baths. Diphtherite of the vagina was observed in a healthy girl of 1½ years; local application of nitr. arg., and the administration of the chlorate pot. proved successful. Fluor albus was observed in four little patients, who were cured by a general antiscrophulous treatment, baths of chamomile flowers (chamom. vulg.), and application of Goulard's water. A case of tuberculous inflammation of the petrous bone ended fatally, by tubercular disease of the brain. Rachitis will in almost every case be cured by cod-liver oil; iron, so highly recommended by some writers of Vienna, proved proportionately unsuccessful.

PROF. LÖSCHNER's, of Prague, report on the Children's Hospital and

Dispensary, is of but little scientific interest. Among 971 patients of the Hospital, the mortality was but 10 per cent., in spite of epidemics of measles and scarlet fever.

The report on the Children's Hospital in Great Ormond Street, London, which was founded by Dr. West, is painfully interesting. The number of beds in 1857 were 31, though the number of 100 beds was originally contemplated. The funds were nearly exhausted.

The reports on Continental Children's Hospitals, are uninteresting; as they do not contain anything except some meagre notices on the Hospitals of Berlin, Frankfort, and Prague.

The Children's Hospital of Graz (Austria), has had, in the twelve years of its existence, 1,803 patients, of whom 1,377 were dismissed cured, and 236 (13 per cent.) died. A large number of patients suffered from scrofula and rhachitism (260), catarrhal affections of the respiratory organs and intestines, and inflammatory diseases of the lungs. Cases of croup were, in 12 years, 8; acute hydrocephalus 5, of which one was saved.

The Foundling Hospital of Vienna received, in 1856, 9,228 infants, of whom 2,105 fell sick; 55 per cent. with acute, 45 per cent. with chronic diseases. The mortality among the patients was 60 per cent. The percentage of diseases of the several systems is the following: Diseases of the nervous system, 2 per cent.; sensory organs, 23; mouth and fauces, 5.5; circulatory and respiratory organs, 12; chyloëpotic system, 20.5; urogenital organs, 0.5; skin, 6.5; nutrition and blood, 21; external diseases, 9 per cent. Besides, there were 6 cases of variola, 1 of measles, 1 of scarlatina, 2 of hooping cough.

There are two Hospitals and 5 Dispensaries for sick children at Vienna. The main statistics are given in the following statements:

	1. St. Annen Hospital.	2. Francis Joseph Hospital.	3. First Public Dispensary.	4. Disp. of St. Annen Hospital.	5. Disp. of Francis Joseph Hospital.	6. Second Disp. on the "Wieden."	7. Disp. at Mariabill.
Number of patients,.....	1,188.	369.	2,819.	3,531.	1,561.	2,086.	6,340.
Acute diseases,.....	70 per cent.	67 per cent.	71 per cent.	72 per cent.	74 per cent.	73 per cent.	71 per cent.
Chronic diseases. ....	30 " ....	33 " ....	29 " ....	28 " ....	26 " ....	27 " ....	29 " ....
Mortality.....	27 " ....	12 " ....	not given.	not given.	not given.	not given.	not given.

## A. Diseases of single systems—

Dia. of nervous system.....	5.4 " ....	4.5 " ....	1.5 " ....	6.5 " ....	3 " ....	5.5 " ....	8 " ....
" sensory organs.....	11 " ....	8.5 " ....	6 " ....	6.5 " ....	6.5 " ....	2 " ....	5 " ....
" mouth and fauces.....	2.5 " ....	2 " ....	2 " ....	4.5 " ....	2 " ....	3.5 " ....	3 " ....
" resp. and circ. organs...	17 " ....	19.5 " ....	25.5 " ....	21 " ....	27.5 " ....	25 " ....	30.5 " ....
" chylipoëtic system.....	12.5 " ....	6 " ....	15 " ....	16 " ....	18 " ....	12 " ....	25 " ....
" urogenital " .....	0.1 " ....	0.5 " ....	— " ....	0.5 " ....	1 " ....	4 " ....	1 " ....
" skin .....	21.5 " ....	28 " ....	6 " ....	15 " ....	13 " ....	29.5 " ....	6.5 " ....
" nutrition and blood....	21 " ....	18 " ....	33 " ....	20 " ....	17 " ....	7 " ....	14 " ....
External diseases.....	9 " ....	13 " ....	11 " ....	10 " ....	12 " ....	11.5 " ....	7 " ....

## B. Contagious diseases—

Variola.....	28 " ....	23 " ....	— " ....	16 " ....	11 " ....	3 " ....	9 " ....
Measles.....	5 " ....	6 " ....	— " ....	27 " ....	4 " ....	12 " ....	— " ....
Scarlatina.....	15 " ....	23 " ....	9 " ....	14 " ....	12 " ....	8 " ....	9 " ....
Hooping cough.....	1 " ....	24 " ....	28 " ....	10 " ....	15 " ....	12 " ....	4.5 " ....

DR. SCHREBER exposes children suffering from scrofula, atrophy, bad general development without a distinct organic disease, anæmia, flabby and pale skin, torpid tumors, osseous swellings, etc., to the sun, one, two, three times a day, keeping the child, the head covered, from ten to thirty minutes (no longer, for fear of erythema) in a room, undressed (full bath) or half dressed (half bath). He expects the sunbeams to enliven the peripheric nerves both generally and locally.

DR. POLLARD advocates the use of opium in cautious doses, as he considers the objections to its administration in diseases of infants unwarrantably magnified by some writers. Generally, opium is much dreaded in diseases of infants, for its dangerous effects on the cerebrum and meninges. We think that it must be dreaded when given without strict indications, but will easily be tolerated whenever it is not applied unscientifically or wantonly.

DR. POLITZER has expressed, before a Medical Society at Vienna, his views on several important points concerning infantile pathology, of which we select the following: High rate of mortality is no physiological consequence of infantile nature, but is produced by accidental obnoxious incidents. On the contrary, things are even more favorable in infancy, the causes of diseases increasing in number and severity with advancing years, and the frequency of so-called infantile diseases being greatly overrated. Typhus, pneumonia, and morbilli give proof of the readiness of recovery in children; but diarrhœa is very dangerous. Diseases from teething and worms do not exist. Emetics and purgatives are much misused, so are leeches; opium requires great care and caution. Constitutional diseases ought to be treated in early age, and never overlooked indifferently; iron is especially indicated in the chronic form of rachitis; acute rachitis is frequently mistaken for some other trouble. Suppression of chronic exanthems is by no means dangerous; diaphoresis never ought to be resorted to for the purpose of reproducing an exanthem that has disappeared.

DR. SCHAUENSTEIN's and Dr. Späth's careful examinations have resulted in the following facts, viz., rhubarb was found in the breast-milk, sulphate of potassa was not. Iodine was proved to be present, after having been taken by pregnant and nursing women, in the meconium of the fœtus, in the urine, milk, and amniotic liquor during pregnancy. The chemical signs of mercury were not discovered with any degree of certainty.

DR. PLOSS, after reviewing former opinions on the subject, tries to arrive at a result from a great number of exact statistical reports. The principal conclusion he draws, and found very rarely refuted, is this, that the sex of the children born during a year is in a strict proportion to the dearth and consumption of bread and meat. The number of males will always increase with the scarcity and dearth of bread and meat, while in those years where these victuals are copious, the number of males is less. Such is Dr. Ploss' conclusion, arrived at, not only by statistical comparisons of different nations or districts, but of the same localities or populations in different years. It is to be kept in mind, however, that at all events the number of newly-born males is always and everywhere absolutely

larger than of females, and that, therefore, the above stated conclusions must not be considered but in regard to the relative number of females and males.\*

MR. THOMSON arrives at the conclusions: 1. That in the lower animals, and in man also, the influence of the male is greater than that of the female parent, in the transmission of the *skin* texture to the progeny. 2. That the exceptional cases (probably more in man than in the lower animals) lead us to look for some primary or secondary law presiding over the physiology of generation.

DR. EDGREN reports two cases of children swallowing needles without unfortunate consequences. A boy, three years old, swallowed a needle two and one-half or three inches in length, which a month later penetrated the skin, near the sternum, from beneath the pectoral muscle. A boy of four years of age, swallowed a large pin with a big head, the head going down first. On the third day after, there was pain in the right side, about the region of the pylorus and duodenum. On the eighth day, the head was removed from the anus, only an inch of the pin being in connection with it.

MR. SILVESTER draws, from a large number of cases observed by him, a series of conclusions, of which the following are the most important: 1. The deformity appears to be the result of, first, the malformation of the germ; secondly, the subsequent deformation of the embryo and foetus, by causes operating on its development: and, thirdly, by certain compensations and vital accommodations having a conservative tendency. 2. The arrest of development reacts on various parts of the body, and particularly on such parts as have either a casual or a natural connection with the original malformation. 3. A law of compensation prevails during the growth of monsters, consisting in a tendency to render the parts as nearly normal as possible, and to make up by excessive formation for the defective development of an adjoining part. 4. The several parts of the body are formed and developed independently of each other. 5. The muscles are directed to fixed points of attachment, and in the most nearly regular way possible under altered circumstances. When a bony insertion is unattainable, they unite together by their tendons; there is a vital accommodation to the exigency of the case. 6. The absence of the usual bony attachment, or the want of a firm point of insertion, exerts a material influence upon the development of a muscle. 7. The absence, or defective state of an organ, reacts unfavorably upon the formation of the nerves and vessels which supply it, even at a distance. 8. The deformity in the arm does *not* conform to the rule laid down by Rokitsansky: "When the radius is wanting, the thumb and forefinger, with so much of the carpus as belongs to them, are wanting too."

Among the congenital malformations observed in the clinique of Prof. Scanzoni were: 1. Fractures of the bones of all the four extremities. The right forearm was fractured just above the carpal joint, the left a little higher, either of the femora above the condyli, the left leg above the ankle. The arms were kept bandaged, the lower extremities were left to nature. A cure was effected within eight weeks. 2. Absence of the soft palate, and coherence of the

last two toes of the left foot. 3. Supernumerary thumbs. 4. Cases of atresia ani, both epidermoid and membranous. 5. Insufficiency of the bicuspidal and tricuspidal valves, which was diagnosticated before birth, by Prof. Scanzoni.

DR. MARTINI gives a review of the recent progresses of the surgical treatment of congenital malformations, such as imperforate anus, obliterated ileum, and spina bifida. None of his facts and extracts belong to the year 1858. Such is also the case with the cases collected by Dr. Schultze.

DR. BUDD describes a fœtus, perforated and extracted by means of the crotchet, twenty-three and one-half inches long, and weighing a trifle over twelve pounds. The measures of the cranium are of little moment, as the bones were broken and cerebral substance evacuated.

DRS. RAMIS AND BRESLAU report the case of a woman of thirty-nine years, who had borne three children; the youngest one, one and one-half years old. The fourth pregnancy took a regular course, being troubled by neither bodily nor mental affections. She brought, without artificial means, a xiphodyme, with two heads, two thoraxes, four humeri, four arms. The two xiphoid processes cohered closely. There were only one abdomen, two lower extremities, one umbilicus, one set of female genital organs. The monster was born at maturity, lived eight days, either half like an independent being. Nevertheless the organs of nutrition appeared to be in connection with each other. Death ensued on the eighth day, one dying about fifteen minutes after the other, as is usual in monsters of this description.

DR. JOHNSON has observed the case of a child born at maturity, and living for half an hour, who was large and perfectly well-formed from the attachment of the cord upwards. "From the navel downwards, there was a gradual tapering. There were no genital organs, no anus, and no well marked pelvic bones. At the junction of the sacrum, with the lumbar vertebrae, there was an interruption of the spinal column. A small circular scab covered this opening in the spine, and, we suppose, closed the termination of the rectum. All the bones of the legs were present except the patellæ. There was no line of demarcation between the legs, both being enclosed in the same cuticle, and one single set of muscles. To this double leg, there was attached a single club foot, with ten perfect toes."

DR. JACKSON reports, from the practice of Dr. D. J. Perley, of Old Town, Me., the case of two fœtuses united, face to face, from the umbilicus to the upper third of the sternum, living until about ten minutes after birth. There was but one placenta, and but one funis, until it arrived within about two inches of the fœtal abdomens, when it divided, and a branch went to supply each of the children. The following organs were found in each fœtus, and they were well formed: the spleen, two kidneys, with their renal capsules, the bladder, and the testicles; all four of the latter being in the abdomen. Penis of each large. Vesiculæ seminales of each well developed. Pancreas of one, "felt, but not dissected." The heart was single, but

formed by a fusion of two, and contained in a single pericardium. Its transverse diameter was much greater than the longitudinal. Between the two right auricles there was nothing like a septum; the left auricles also opened freely into the right. The great vessels naturally offered many anomalies as to size and course. There were two livers, the whole mass being small for the two fœtuses. They were intimately fused by their upper edges or extremities, and each had its gall-bladder; in each the umbilical vein entered the convexity, and each had its suspensory ligament. The diaphragm formed a large arch. There were two distinct pleural cavities, two sets of lungs, two tracheas, larynxes, thyroid and thymus glands. Weight of the two fœtuses five pounds ten ounces; length fifteen and three-fourth inches. No hernia at insertion of cord.

## II. DYSCRASIC AND TOXAEMIC DISEASES.

1. Gabriel, *Case of Intermittens Larvata Bihebdomadaria*.—Jour. f. Kinderkr. 1, 2.
2. Heidenhain, *on Intermittent Fever*.—Virch. Arch. XIV. 5, 6.
3. Craig, J. W., *Cerebro-spinal Meningitis: Brain Fever*.—Buff. Med. Jour. July.
4. Avrard, *on Pernicious Intermittent Fever in Children*.—Gaz. d. Hôp. 70.
5. Jones, C. Hansfield, *Malaroid Intermittent Fever in Children*.—Brit. Med. Jour. July 31.
6. Joseph, *Case of Intermittens*.—Virch. Arch. XV. 1, 2.
7. Mall, J., *Typhus, with Secondary Croupous Inflammation of the Respiratory, Intestinal and Vaginal Mucous Membranes*.—Allg. Wien. Med. Zeitschr. 22.
8. Lebert, *New Investigations on the Pathological Anatomy of Abdominal Typhus*.—Prag. Viert. 1.
9. Bazin, Er., *Leçons Théoriques et Cliniques sur la Scrofule, Considérée en Elle-même et dans ses Rapports avec la Syphilis, la Dartre et l'Arthritis*. Paris. pp. 262.—(*Theoretical and Clinical Lectures on Scrofula, Considered in Itself and in its Relations to Syphilis, Tetters, and Gout.*)
10. Peloly, G. F., *Qu'est ce que la Scrofule?* Paris. Thèse. pp. 32.—(*What is Scrofula?*)
11. Faye, F. C., *The Children's Hospital at Christiania in the years 1855-1857*.—Journ. f. Kinderkr. 11, 12.
12. Massé, Z., *Trois Maladies Réputées Incurable, Epilepsie, Dartres et Scrofule*. Paris. IV. ed. pp. 251.—(*Three diseases Reputed Incurable, Epilepsy, Tetters, and Scrofula.*)
13. Hauner, *Report on the Eleventh Year of the Dispensary Connected with the Children's Hospital at Munich*.—Jour. f. Kinderkr. 7, 8.



14. Hauner, *Therapeutic Notices from the Children's Hospital at Munich*.—Jahrb. f. Kind. II. 2.
15. Leriche, *de l'Emploi de Nouvelles Formules Jodiques comme Succédanées de l'Huile de Foie de morue dans la Scrofule, et de l'Jodure de Potassium dans les Affections Syphilitiques*.—(*On the Use of Formulas of Iodine Instead of Cod-liver Oil in Scrofula, and of Iodide of Potassium in Syphilitic Affections.*)
16. Lebert, *Observation of Scrofula Healed by Iodated Alimentation*.—Un. Méd. 124.
17. Engert, *on Tuberculosis and Scrofula in the Infantile Age*.—Journ. f. Kinderkr. 5, 6.
18. Rollet, *Hereditary Transmission of the Tuberculous Diathesis*.—Gaz. Méd. de Lyon. 19.
19. Hutchinson, *Cancer of the Testicle in a Child*.—Med. T. and Gaz. May.
20. Diday, P., *Exposition Critique et Pratique des Nouvelles Doctrines sur la Syphilis, Suivie d'une Etude sur de Nouveaux Moyens Préservatifs des Maladies Vénériennes*. Paris. pp. 560. (*Critical and Practical Exposition of the New Doctrine on Syphilis, with Investigations on New Preservatives against Venereal Diseases.*)
21. De Méric, V., *Third Lettsomian Lecture on Hereditary Syphilis*.—Lanc. Dec.
22. Parker, L., *Lectures on Infantile Syphilis*.—Lanc. Aug., N. Y. Jour. of Med. Sept.
23. Knoblauch, *Aerztlicher Bericht über die Leistungen des Rochus-spitales zu Frankfurt a. M., im Jahre 1857*. (*Medical Report on the Results of the Rochus Hospital at Frankfort, in the year 1857.*)
24. Friedinger, Mayr and Zeissl, *on Syphilitic Eruptions in the Infantile Age*.—Jahrb. f. Kind. II. 1.
25. *Congenital Syphilis in an Infant a few Weeks old*.—Lanc. Oct.
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27. Hutchinson, J., *Death from Hereditary Syphilis*.—Lanc. Aug.
28. Hutchinson, J., *Report on the Effects of Infantile Syphilis in Marrying the Development of the Teeth*.—Trans. Path. Soc. IX. p. 449.
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30. Sigmund, C., *Notices on Syphilization as Performed by Dr. Sperino*. Z. d. Ges. d. A. z. Wien. 46.
31. Thompson, *on Diphtherite*.—Brit. Med. Jour. 75.
32. Atcherley, *on Epidemic Ulcerous Angina*.—Brit. Med. Jour. 77.
33. Heslop, T., *on Diphtherite and its Treatment*.—Med. Times and Gaz. 413.
34. Martin, *Pseudo-Membranous Angina, Extraction of False Membranes by Means of the Finger, Cauterization with Hydrochloric Acid*.—Journ. d. Méd. (Brux.) May.
35. Barthez, E., *on Diphtherite*.—Un. Méd. 133.

36. Beale, L., *The Structure of Pseudo-Membranes in some Cases of Diphtherite*.—Arch. of Med. I. 3.
37. Bouchut, *on the Treatment of Diphth. Angina*.—Gaz. Hebdom. 44. G. Hôp. 127.
38. Bouchut and Empis, *on Albuminuria in Croup and Diphth. Diseases*.—Un. Méd. 132.
39. Bryden, W. A., *on the Treatment of Diphtherite*.—Brit. Med. Jour. Nov. 6.
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42. Giraud-Teulon, *Retrospect on Croupous Affections*.—Gaz. de Par. 46.
43. Mauguin, A., *Des Eruptions qui Compliquent la Diphthérie et de l'Albuminurie Considérée comme Symptôme de cette Maladie*.—Paris, Duboisson & Co. pp. 32.—(*On the Eruptions Complicated with Diphtherite, and on Albuminuria Considered as a Symptom of this Disease.*)—Mon. d. Hôp. 130, 131.
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45. Sée and Piogey, *on Diphtherite, Croup and Tracheotomy*.—Un. Méd. 154.
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47. Wade, W. F., *Observations of Diphtherite*.—London. pp. 32. Edinb. Med. Jour. Dec.
48. Ward, T. O., *Cases of Diphtherite*.—Trans. Path. Soc. IX. 217.
49. *Harveian Society; Diphtherite*.—Lancet. June, July, Sept.
50. Godfrey, B., *Reports of Cases of Diphtherite or Malignant Sore Throat*.—Lanc. Jan.—N. Y. Jour. of Med. March.
51. Henderson, J., *a Case of Cynanche Maligna; Tracheotomy. Performed*.—Edin. Med. Jour. Nov.
52. Brown, B. M., *Report of Two Cases of Diphtherite*.—Lanc. May. N. Y. Jour. July.
53. Camps, *the Lately Prevailing Diphtheritic Affections*.—Lanc. May.—N. Y. Jour. July.—Brit. Med. Jour. March 20.
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55. Fourgeaud, V. J., *Diphtheritis: A Concise Historical and Critical Essay, on the Late Epidemic Pseudo-Membranous Sore Throat of California (1856-57), with a Few Remarks Illustrating the Diagnosis, Pathology and Treatment of the Disease*.—Pac. Med. and Surg. Jour. X. (Reprint. Pamphl.)
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57. *Diphtheritis, the Quinsey Malignant Sore-Throat Prevailing in Albany, N. Y.*—Am. Monthly. Dec.

58. Fuller, *a Fibrinous Cast of the Pharynx, Ejected by a Patient of Eleven Years Suffering from Diphtherite*.—Trans. Path. Soc. IX. 206.
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60. Wilks, *Diphtheria and its Connection with a Parasitic Vegetable Fungus*.—Med. Times and Gaz. Oct. 2.
61. Laycock, *on Diphtheria as caused by the Oidium Albicans*.—Ibid. May 27.
62. Hauner, *Therapeutical Notices from the Children's Hospital of Munich*.—Jahrb. f. Kind. II. 2.
63. Jacobi, A., *Report on the Progress of Infantile Pathology and Therapeutics*.—N. Y. Jour. of Med. July.
64. Kingsford, Ch. D., *on Diphtheria*.—Lanc. Nov.
65. Santesson, *Case of Hydrophobia*.—Journ. f. Kinderkr. 3, 4.
66. Bouchut, E., *on Diphtheritis, Actual Cautery, and Amputation of the Tonsils*.—Un. Méd. 127.
67. Vigla, *Communications Relative to Pseudo-Membranous Pharyngitis*.—Un. Méd. 115.
68. Schwarz, F., *on Solid Nitrate of Silver in Diphtheritis*.—Oest. Z. f. prakt. Heilk. 32.

Dr. GABRIEL reports the case of a boy of fourteen years of age, who had been suffering, for the last two and a half years, from headache and vomiting, every fourteenth day, which was always Tuesday; the boy being entirely well the other thirteen days. He soon recovered after taking chin. and ac. arsenicos.

Dr. HEIDENHAIN gives, in an elaborate article on intermittent fever in general, his views and experience on what he calls convulsive intermittens, viz., such cases of intermittent fever in children as show no other prominent symptoms except convulsions, instead of the usual symptoms of fever. In the majority of cases only one side is affected; whenever both are, they are alternately. The attacks last for 4, 6, 8 hours, without dangerous results, or with parietic weakness or complete paralysis following. Sometimes in Heidenhain's experience, the child died in the second attack—always in the third. Death ensues with the symptoms and the pathological alterations of hydrocephalic apoplexy; the commencement of each attack resembling very much hydrocephalic apoplexy, and ending in sweating, with a large or slowly diminishing number of pulsations, and high temperature of the skin. The diagnosis is very difficult; the prodromi must be carefully weighed, and the epidemic genius considered. But it must be remembered, also, that hydrocephalic apoplexy is as common in Spring as intermittent. Already, Gölis has spoken of an intermittent form of hydrocephalus; thus this disease, and tubercular meningitis, may be mistaken for intermittent fever. Dr. H. reports the case of a girl of 9 months of age, who went through a sudden attack of convulsions, returning about the same hour on the third day; the last attack appearing less severe than the

first. Death ensued after 8 days had elapsed, and the post-mortem examination showed purulent arachnitis. During the convulsive attack nothing should be done ; some good may be effected by cold applied to the head ; leeches are always injurious.

Dr. CRAIG reports a series of cases occurring among adults and children, of meningitic symptoms invading suddenly and abruptly, with chills, followed by prostration, pain in the head and neck, and vomiting. The diagnosis was much more certain by a periodicity of the disease after it had existed for a few days. All of his cases, which were 129, 12 of which proved fatal, occurred at a time when there was a prevalence of miasmatic diseases, such as intermittents and remittents, of a persistence and severity before unknown. The whole course of the disease, and the success of the treatment by large doses of quinine and stimulants, proved the miasmatic origin of the disease. Death occurred in 5 cases within 36 hours ; in 3 within 1 week ; in 1 in the 5th week ; in 1 in the 8th ; in 2 after several months. The post-mortem examinations "revealed a softened condition of the base of the brain and upper portion of the spinal cord, with a very copious effusion of limpid fluid in the ventricles—in one case amounting to 8, in the other to 12 ounces." Evidently, all these cases of Dr. Craig do not deserve the name of "cerebro-spinal meningitis," as given by the author, but are cases of intermittent fever like those of Dr. Heidenhain.

Thus Dr. AVRARD rightly answers the question put by Bouchut, Is pernicious intermittent fever ever met with in infantile age ? affirmatively ; in declaring at the same time the diagnosis to be more difficult than in adults. Troubles of dentition or meningeal affections often give rise to mistakes. Two cases are given as illustrations.

Dr. JONES describes a morbid condition met with in children, not entirely corresponding with what is called remittent fever in adults. The children have been gradually losing health for several days or weeks ; they are languid, drooping, emaciating, and, without appetite, more or less thirsty. The night is the time of most disorder ; there is considerable cerebral disturbance ; in some cases, also, copious perspiration. The children may be apyretic during the day, but become feverish at night. The bowels may be costive or much relaxed. The tongue is clean in some, in others coated. Quinine in large doses, was found to be of decided curative efficacy. Cod liver oil and steel wine he also sometimes gave with advantage. He is much inclined to consider these fevers as of malarious character, and we do not perceive, indeed, why he should not, because, in the series of symptoms enumerated, the high nervous excitability of the infantile age taken in account, there is nothing that would not agree with the symptomatology of so frequently indistinct malarious processes.

A rare ingeniousness is exhibited by Dr. JOSEPH, in discovering a new variety of intermittent fever, viz., the "intermittent worm fever." A boy of  $2\frac{1}{2}$  years evacuated a large number of oxyuris vermicularis, after injections had been given ; for three weeks he did not feel well, and finally had two severe attacks of daily intermittent fever. Dr. Joseph administered santonine, but without success

as to the ejection of helminths. Finally, quinine was given, and the boy recovered rapidly. This was a case of intermittent worm fever in the opinion of the author, while we are surprised at his naïveté, and see in the whole report nothing but a boy evacuating some innocent helminths, and suffering afterwards from the prodromi, and, finally, the attacks of intermittent fever.

Dr. MALL observed a case of abdominal typhus in a girl of 6 years of age, the complications of which are unusually interesting. On and after the eighth day of the disease, pseudo-membranes developed themselves in the mucous membranes of the nose, and went down into the larynx, mouth, œsophagus, stomach, intestines, and vagina. Local applications of borax and roborant remedies and diet formed the principal part of the treatment. The child finally recovered.

Of all the cases of abdominal typhus recorded by Prof. LEBERT, ten per cent. occurred in individuals under fifteen years of age. In this early age intestinal affections were little or not at all discovered. The examination of a girl of fifteen years, who died after the fourth week of the disease, resulted in the following facts: Meninges and brain contained a moderate amount of blood, the ventricles little serum. Lungs were full of blood, otherwise normal; in the heart, black and fibrinous coagulations were found; the liver was normal, the spleen very much enlarged, seventeen centim. long, eight broad, and three and a half thick; it was soft and dark; kidneys and mucous membrane of the stomach normal; mesenteric glands somewhat swelled; the small intestines were nowhere ulcerated, Peyer's glands slightly swelled, some small sugillations near the cœcum; solitary glands normal. The mucous membrane of the large intestines were nowhere softened nor swelled, but generally very hyperæmic. Another child, feeble and emaciated, left no pathological signs. A third patient, already recovering, was affected with peritonitis of the right side, and died twelve days afterwards. The fundus of the gall-bladder was perforated and surrounded with a purulent peritoneal exudation. In the dilated gall bladder there were some ulcers of diphtheritic appearance, ductus choledochus was obliterated probably in consequence of ulcerous inflammation of the dilated gall-bladder. In general, the results of Prof. Lebert agree with those of Dr. Friedrich, who has proved alterations of the intestines and pathological changes in general, to be by no means frequent in abdominal typhus of the infantile age. Besides, it is well known, that Drs. Rilliet and Barthez have found resolution of the swelled glands of Peyer to be not an uncommon process even in a stage of the disease where ulceration is going on actively.

The subject of Dr. BAZIN's book has been treated of so many times and so variously, that the reader will necessarily expect some new facts or views in opening another volume on the same subject. We must confess that he will feel sadly disappointed. The author's discoveries are no discoveries, his new facts are very old, his classification is either prolix or confused, and his pathological views are very antique indeed. The old doctrine of diatheses is confessedly only a scape-goat of our ignorance, so much so, that every educated physician of the present time feels somewhat confused or unsatisfied in

merely pronouncing the word ; the author, however, is so far from feeling the necessity of limiting the use of the term of "*diathesis*," that he invents some other diatheses besides those the unsatisfactory state of modern pathology requires. According to him, a diathesis is "an acute or chronic, feverish or unfeverish, continued or intermittent, contagious or not contagious disease, characterized by the formation of one, single, morbid product, which may have its seat indiscriminately in all the organic systems." Thus there are purulent, chondromatous, tuberculous, hemorrhagic, serous, saccharine, and calculous, pseudo-membranous, gangrenous, adipose, fibrous, cancerous diatheses (p. 10). Nothing can be more convenient than to hide one's self behind the screen of a Greek word with more sound in it than intelligibility and pathological signification. One of the "discoveries" of the author is that the lesions of the skin are no diseases, but symptoms of diseases ; that, therefore, the investigation of cutaneous eruptions ought to be considered as a part of general semiotics. Another discovery of the author's is, that cutaneous diseases are affected either by external or by internal causes, and that parasitical diseases belong to the first class ; that parasitical diseases have been confounded with cutaneous affections from internal causes up to his, the doctor Bazin's time, but that, "God be praised for it," this family is now at last established on a solid basis. As his third important discovery the doctor asserts, that cutaneous eruptions from internal causes are "either congenital or pathological." *Nævi* and *ichthyosis* belong to the "congenital" affections, the "pathological" are composed of the exanthems, and the whole number of diseases of the skin called *impetigines* by Frank. The usual name of these "*impetigines*" is *tetter*, according to the author ; for which four principal diatheses can be found to exist, viz., *scrofula*, *syphilis*, *herpetism*, and *arthritis*. Now *tetter*, when the consequence of only one diathesis, is very easy to diagnose and to cure ; but it is often the result of a number of diatheses combined, and then our author declares it to be truly a terrible affair. Thus our readers perceive, that the author not only turns his back upon even a trial of physiological investigation, but hastens to return to the very worst ontological period which medical science has long ago overcome. This book is a useless play-work of classifications and sub-classifications, without scientific foundation, without new facts. The only thing new, is his return to ontology ; his manner of writing and explaining is very discouraging. We venture to pronounce the opinion, that nobody will ever read this book from the first to the last page, except the author, without becoming either simply tired or thoroughly disgusted.

Dr. PELOLY defends Piorry's opinion on the absence of a peculiar diathesis in what is generally known by the collective name of *scrofulous* affections. We may say that the opinions of medical men of modern times on this subject, are not very different from each other, although they may appear to be so ; for it is evident, that a local trouble affecting digestion and assimilation, will always influence the formation and composition of blood, and that very often what was but the consequence of a local affection, has been mistaken for

the original cause of later troubles of the system. From this point of view we regard the seeming difference between the opinions of Prof. Von Dübén and Faye. We think that both of them will readily subscribe to the following notice on Mr. Duriau's report on Prof. Piorry's lecture on scrofula,\* published by us in the *N. Y. Jour. of Med.*, Nov., 1858 :

"Inflammatory action becomes manifest by the stopping of sanguineous or lymphatic circulation, by the coagulation of the liquid contained in the vessels, and, finally, by the exudation of a plastic lymph. After the inflammation has ceased, circulation may take place again by means of the vessels, but the plastic product exuded into the interstitial cellular tissue will not disappear in the same manner. It will undergo a process of condensation, and leave an induration of the ganglion, which by itself will, more or less, prevent lymphatic circulation, and give rise to a new pathological affection somewhere else in the organism. Thus, such an induration must not be considered as the symptom of a specific diathesis. Now, these indurations are very slow in their development, and especially does suppuration take a very slow and tedious course. But this, although being a general fact with "scrofulous" individuals, is not a proof of the existence of a peculiar diathesis ; for all such patients, suffering from the influence generally admitted to be the cause of "scrofula," as inappropriate food, bad air, etc., have a small heart, a small quantity of blood, and exhibit a slow circulation ; and undoubtedly, according to Magendie, the circulation of the blood has a direct influence on lymphatic circulation. Therefore, in cases of this description, reâction and absorption are less powerful. "Scrofula," then, is but a defective development of organization, with the characters of anæmia or hydræmia, and consequently a disposition to indurations and swellings of the ganglia. Moreover, Lebert was unable to detect hereditariness of "scrofulous" symptoms in more than a third of his cases—an assertion which diminishes a great deal the necessity, of assuming a diathetic peculiarity. Neither the general disposition, nor real local lesions must be classified as a specific disease. Even the chemical alterations of the blood, that have been found, are to be considered as a consequence of local lesions and the general quality of the blood, and not as a primary disease. Scrofula, then, is no more a specific disease according to Piorry than according to Velpeau."

Of the book of Dr. Massé on epilepsy, tetter, and scrofula, the fourth edition has appeared. It is destined to enlighten the public on the nature and cure of those obstinate diseases, and to prove, what nobody ever denied, that not all the cases of epilepsy, tetter, or scrofula are incurable.

DR. HAUNER, in all scrofulous affections, attended always to the general disease ; taking scrofula to be always the consequence of vicious alimentation. He never saw a local cure yielding successful results. As to special and specific medicaments, he declares to have

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\* De la scrofule, leçons cliniques, professées à l' Hôpital de la Charité. Par M. PIORRY, recueillies par M. FREDERIC DURIAU, Paris, 1857.

never seen any effect of cod liver oil on scrofula and tuberculosis of children ; but highly praises the administration of equal parts of old claret and Heilbronn water, from four to eight teaspoonfuls a day.

Dr. LERICHE puts his confidence in iodine. His method of administering it, is to give a syrup of the seeds of *sisymbrium officinale* with iodine. Besides, he likes to prescribe tincture of iodine to be taken in claret. We should always prefer to administer a medicament in a simpler manner, and do not think that a practitioner will find it very difficult in private practice to cure, without Dr. Leriche's recipes, 21 scrofulous patients out of 38, in the course of several years. One case of cured scrofula has been reported by Dr. Lebert, who refers to a young man of sixteen years, who had been suffering from scrofula for six years past, and did not get well before having had, for a while, his bread mixed with iodine.

Dr. ENGERT gives a report on the cases of scrofula and tuberculosis observed during the course of a year, in the Children's Hospital of Munich. He counts such cases of scrofula only, where the diagnosis cannot be doubted because of preceding diseases, hereditary influences, and evident scrofulous habitus. Rhachitis, craniotabes, idiotism, and struma are not counted in the number. Of 2,916 patients, 360 were scrofulous. In 70 others suffering from diseases of the eyes and skin, the origin was dubious. There was no difference as to sex, 178 boys, and 182 girls being affected. The majority of cases occurred from the second to the eighth year of life ; 10 per cent. of the whole number of cases belonging to the second, 28 per cent. to the eighth year. The relative immunity from this class of diseases, in the first period of life, Engert explains by the prevalence of intestinal diseases followed by atrophy and death, before constitutional diseases have a chance to finish their slow course. Scrofula in the 360 cases referred to, showed itself in 10 per cent. as tubercular disease, in 20 as diseases of bones and joints, in 40 as ophthalmic diseases, in 22 as cutaneous, and in 8 per cent. as affections of the mucous membranes. Hereditary influence appeared to act most unfavorably, as cause of the disease ; so did moisture and darkness of the rooms ; food seemed to be of less dangerous influence. The treatment was more a dietetic one, than by medicaments ; as iodine, the syrup of the iodide of iron, and cod liver oil containing iodine.

Dr. HUTCHINSON records the case of a boy who exhibited the first swelling of a testicle when a year and five months old. At the age of 2 years 3 months the testicle was operated upon and a medullary cancer of the size of a man's fist removed. The child was well for 8 months, when symptoms of pulmonary cancer developed themselves. He died eleven months after the operation had been performed. Both of the lungs were infiltrated with medullary cancer. A cancer of the size of a pea was found in the liver, but nowhere in the other abdominal organs. Two aunts of the patient, sisters of his father, had died from cancer of the mamma.

Dr. DIDAY again, as in his "Essay on Syphilis of New-born Infants and Nurslings" (Paris, 1854, pp. 439), discusses the important questions : by whom the infant can become infected, and whom it can



itself infect. The infant may be infected by the father, although he does not show actual symptoms of syphilis ; it may be infected by the mother either in the moment of conception or during pregnancy ; it may be infected by its nurse. Again, the foetus after having contracted syphilis from the father, can infect the mother ; and the infant suffering from hereditary syphilis can give the disease to any body that approaches it, because the lesions of hereditary syphilis, although showing the outside appearance and evolution of secondary syphilis, are distinguished from common syphilis by their being as contagious as primary accidents. The elucidation of these facts, which begin gradually to be taken as such by the whole profession, we principally owe to Dr. Diday.

DR. DE MÉRIC considers hereditary syphilis from two points of view—1, the limitation of time as to the appearance of the symptoms ; and 2, the action of the infected foetus upon the healthy mother. Out of forty-six cases of hereditary syphilis in children born alive, only two presented at birth distinct symptoms of syphilis ; two a few hours after birth, four a few days, five from ten to three weeks, ten from six to thirteen weeks after birth. Thus there were 21 cases in which the symptoms appeared before the child was thirteen weeks old. In seven other cases the symptoms appeared at the age of three months, fourteen months, twenty-one months ; two years and three months, eight years, twelve years, fifteen years. As to scrofulous diseases being the consequences of hereditary syphilis, Dr. De Méric does not feel entirely satisfied, nor does he allow of more than the possibility sometimes proved, sometimes denied by facts, that the mother may be infected by the syphilitic foetus.

The main points of a lecture delivered by Dr. PARKER, are the following : A father having symptoms of constitutional syphilis at the time of marriage, or at periods more or less remote before it, may procreate a diseased infant, and the mother may never exhibit any symptoms of disease. The explanation of these cases appears to be, that the ovulum is impregnated with diseased semen, and its product is consequently diseased. The chances are in favor of the child escaping, if the outbreak of disease has been very violent, *i. e.*, if the skin has been loaded with eruption, or again, if the patient has been submitted to a prolonged and energetic treatment. The mother sometimes retains her immunity, but in a number of cases does not ; in such cases, the mother derives her disease from the foetus, a proof whereof is the fact, that the symptoms of syphilis in the mother very frequently disappear after abortion or delivery, even without treatment. Some even assert the mother to get diseased sometimes from the seminal fluid alone. The mother may be the source of disease to her foetus, or infant, in four ways : 1, she may be diseased before conception ; 2, she may become diseased after she has conceived ; 3, she may disease her infant in its passage through the vagina, or 4, after birth. Where the father impregnates the foetus with diseased semen, the infant, having been developed in the womb of a healthy female, will usually be cured ; a cure is probable also in an infant, whose parents were both healthy before its birth, but whose mother was diseased afterwards, and communicated the disease to her

offspring. Where the infant is conceived and developed in the womb of a mother diseased before conception, the prognosis is most unfavorable.

Dr. KNOBLAUCH reports a case of hereditary syphilis occurring in a girl of two months, who, at and after the age of six weeks, was affected with syphilitic coryza, spots and pustules rapidly transforming into ulcers. The copper color of syphilitic eruptions is not always found, not even in adults; in children, seldom anything else is observed except the usual redness of congestion and inflammation. Dr. K. cured his patient, by the use of calomel, within forty days.

Dr. WHITE reports a case, in which parents, being syphilitic about the time of their marriage, had 5 children in 6 years, all of whom were syphilitic.

DRS. FRIEDINGER, MAYR, and ZEISSL consider the principal forms of syphilitic eruptions in infantile age to manifest themselves as—1, maculated or squamous; 2, papulous; and 3, pustulous. The maculated form is usually found in the face, and consists rather of a decoloration of the flabby and dry skin, than of a real eruption. The skin, although very dry, looks rather fatty, particularly after the spots have turned either intensively pale or brownish, and spread over chin, cheeks, forehead, and, at a somewhat later period, over nates and extremities. The spots, by their not disappearing when pressed under the finger, proved to be of pigmentous nature. Sometimes spots are found either on the maculated brownish surface or on the hitherto healthy skin, which can be compared to roseola only; they seldom remain unaltered, but in the majority of cases rapidly change into psoriasis, flat condylomes, or tubercles, or ulceration. The papulous form is rarely independent of complications, but usually combined with the maculated form; it is usually brownish, and consists of small knots, either dispersed or in groups, mostly on the volar sides of feet and hands; it undergoes either inflammation (acne) or suppuration. Dr. Friedinger observed a case, where but the inferior half of the body was affected with this eruption; the efflorescences were distinctly separated from each other, but gradually enlarged so much as to form uneven, infiltrated spots, but little elevated above the surface of the healthy skin. The dry exudation turned into a thin scurf, leaving the corium dry, and not bleeding like the corium in syphilitic psoriasis. The pustulous form is, in Dr. Zeissl's opinion, less frequent in newly-born infants than in adults; in none of his cases the mother was proved to have been syphilitic—in every one the father. This form is either developed *in utero* (such infants will die before birth or in the first eight or ten days of life), or within eight days after birth; in such cases the little patients lived from twenty to twenty-two days. The opinion of Cazenave and Dubois, who believe purulent vesicles to be found on the volar sides of feet and hands, Dr. Zeissl declares to be erroneous. Nor does this observer agree with Cazenave's assertion, that ulcers will always follow the rupture of purulent vesicles, Dr. Zeissl considering desiccation and peeling off of the epidermis as a much more common occurrence; this being the more certain, the less strength and embonpoint is left to the patient. Loss of substance is perceived only on the sacrum and calcaneus,

where rhagades are found partly from infiltration of the cutis, partly from supination.

Dr. THIRY reports the case of a still-born child, showing the anomaly of the liver, which is considered by Gubler as characteristic of syphilis. The liver was enlarged, hyperæmic, and contained numerous oval, whitish-yellow nuclei, of different sizes and fibro-cartilaginous hardness. The tissue consists of cells, more or less elongated, without nerves nor vessels, that is to say, of fibro-plastic tissue in the first period of development. The parents had not been closely examined for syphilis, but the mother had undergone three successive abortions before. Thiry considers the main characteristic of this hepatic disorganization to consist in induration; the fibro-plastic production, although observed in every form of constitutional syphilis, differing only according to the variety of organs and tissues.

From a number of cases Mr. HUTCHINSON draws the conclusion, that the period of the first dentition in infants affected with hereditary syphilis seems to be accelerated. In cases where information could be obtained, 2 had their teeth at birth, 1 when a few weeks old, 2 about two months after birth, 2 about the usual time; the remainder very late. The teeth are generally small; although the alveolar arches are decidedly below the average size, there are in most considerable spaces between the teeth; they are more round in form, resembling little pegs; they are often worn from mastication, the enamel being very soft. In nearly every case there is a deficiency in the superior alveolar arch, at the anterior portion, so great in some patients, that the upper and lower incisors are a considerable distance from each other when the mouth is shut. The color of the teeth is of a dirty translucent shade.

The same author reports a death from hereditary syphilis after a month's illness, with disease of the heart. The pericardium was distended with coagulated blood, the source of which was not ascertained. The father and mother had primary syphilis two months before the birth of the child.

Dr. FRIEDINGER reports a case of hereditary syphilis, which was due to the father only, the mother having never been affected by syphilis neither before nor during pregnancy. Vaccination in the syphilitic child proved successful, no anomaly being exhibited in the development of the pustules. The use of vaccine matter taken from the child affected with latent syphilis, proved entirely unable to produce any inconvenience in the vaccinated children. A successful cure of hereditary syphilis can be effected by means of mercury, but not without the child being nourished by breast-milk.

Syphilization has been resorted to in hereditary syphilis first by Prof. Boeck, of Christiania, afterwards by Prof. Sperino. The majority of cases exhibited the papulous form. The more imminent the danger appears to be from this grave disease, the more highly this method of treatment, in Prof. Sperino's opinion, is indicated.

Dr. GODFREY reports four cases of diphtherite, and believes the order, in which its symptoms generally occur, to be this: Shivering; intense depression; dryness and tingling of the throat, nares and ears; external swelling of the glands; a whitish spot on the

mucous membrane of the tonsil, gradual deepening in color as the disease progresses ; dysphagia and dyspnœa ; dilated pupil ; impending asphyxia, and death. The disease appears to Dr. Godfrey to be confined to the mucous membrane, neither touching the muscular nor glandular structure. The glandular enlargement is due to sympathetic irritation. Its diagnostic difference from scarlet fever consists in : 1. The absence of all fever ; 2. absence of all rash ; 3. papillæ of the tongue not enlarged ; 4. no desquamation of the cuticle after the disease passes off. In cynanche tonsillaris the abscess forms within the tonsil, and bursts its way out, but in diphtherite, the morbid change commences on the surface of the mucous membrane, and is confined solely to that covering. The extreme and rapid depression is only equalled by the depression of malignant scarlet fever, or the collapse of Asiatic Cholera. Each patient that died appeared to sink from exhaustion and partial asphyxia. The main point in the treatment is to support the patient's powers, by stimulants and tonics ; and to check the inroad of the disease by the application of the strong mineral acids. Tracheotomy is unsafe, because the depression of the patient's powers is far greater than the dyspnœa, and the depression, while appearing before the dyspnœa, cannot result from the blood being improperly aerated. Dilatation of the pupils existed as a marked symptom in every case. Dr. Godfrey believes the tincture of sèsquichloride of iron the best remedy.

A large number of notices on diphtheritis contained in the English journals, are not deserving of any particular attention. The disease being unknown in England, the practitioners of that country think every trifle known everywhere except in England, worthy of being printed. Amongst them are the specimen of "the tonsils and other parts from a case of diphtherite," exhibited by Dr. Ogier Ward in the Pathological Society of London ; the discussions in the HARVEIAN SOCIETY of London as reported in the *Lancet*, which never led to a result, each of the members expressing his opinion and keeping it, and no unanimity as to its local or general character being arrived at ; the cases recorded by DR. GODFREY ; those of DR. FULLER and DR. GREENHOW, and the two cases reported by MR. BROWNE, of deaths by diphtheritic dissolution of the blood, which he regards as a new disease, though allied in some of its character to malignant "scarletfever." Rapid deaths by diphtheritis seem to be of a very rare occurrence in Great Britain, which is an interesting fact as to nosography. Thus, after all, an English physician may be excused for never having seen the disease in question, but not for the total want of knowledge of its existence. For there is scarcely a manual on the diseases of children on the continents of Europe and America, and in England too, that would not state the fact, that some cases of diphtheritis faucium have such an asthenic, adynamic type, and accompany such a general depression of every vital function as to cause death in a short time, without apnœa or any visible material change in the organic structure of the body, except the diphtheritic exudation on the fauces. Such cases are to be considered as proofs of a rapid dissolution of the blood, similar in its effect to the typhous. The like want of knowledge of their own

and foreign literature has been shown by the Medical Society of London, where Dr. CAMPS read a paper on the same subject.

The only continental work known to the English writers appears to be Bretonneau, *Des Inflammations Spéciales du Tissu Muqueux, et en Particulier de la Diphthérie*, Paris, 1826, while the Manuals of Verson, Rilliet and Barthez, Bouchut, Bednar, Hennig, Schnitzer and Wolf, Coley, West, Churchill, Evanson and Maunsell, even Underwood, Condie, Meigs, etc., may be found to contain many remarks on the same subject. Even a good paper written by Dr. Hamilton, for Ed. Med. Jour., Vol. II., p. 235, is unknown to his own countrymen.

Mr. HENDERSON states, that diphtheritic affections, after having been quite unknown in Aberdeenshire, have assumed the form of an epidemic. The history of his case corresponds with what is generally known of diphtheritis. Tracheotomy was performed, but proved unsuccessful, as is generally the case in true diphtheritic affections with a thorough decomposition of the blood. At all events, by means of the operation, "life was prolonged, and suffering was arrested."

According to Dr. FARR's report, diphtheria proved very fatal in Norfolk, Suffolk, Essex, and Staffordshire. Four hundred cases have been attended at Bradwell, in Essex, where eight died out of twenty-one. "Diphtheria is," in Dr. Farr's opinion, "like Asiatic cholera, probably a more intense form of an old disease."

Mr. CAMPS draws the following conclusions from the facts he collected: 1. A disease very analogous to, if not identical with that described by Bretonneau as diphtherite, had existed in England for some years. 2. This disease was mainly of an asthenic, adynamic type; and characterized in the severer cases by the formation of plastic pseudo-membranous exudations. 3. It was primarily pharyngeal as to its seat, and not laryngeal, ergo secondarily, and by complication; thus differing anatomically from croup. 4. Its difference from stomatitis was a difference of degree or intensity, rather than a difference of kind; and one chief point of difference from the malignant sore throat, consequent upon scarlatina, consisted in the tendency to the formation of plastic pseudo-membranous exudations. 5. In many instances this disease possessed the characters of an epidemic. 6. The treatment should be both topical and general; the topical consisting of applications of nitrate of silver, or chlorine, or hydrochloric acid; the general comprising the administration of chlorate of potassa, with chlorine, or a combination of cinchona bark; or its alkaloids; and in the severer cases, calomel in repeated doses, so as to produce ptyalism. In the early stages emetics have proved useful. The vital powers must be well sustained by wine, stout, beef tea, and other invigorating means.

The REGISTRAR-GENERAL, while reporting on the existence of epidemic diphtheria in France, avails himself of the occasion to urge the importance of fresh air, and especially the removal of the sewer gases into the atmosphere in a direct manner, through pipes running up, and at least as high as the chimneys.

Mr. HESLOP recommends, in diphtheria, the administration to an adult, of about twenty-five minims of the London tincture of sesquichloride of iron every two, three, or four hours, conjoined with a few

drops of dilute hydrochloric acid. He also applies daily, sometimes twice a day, by means of sponges, a solution of hydrochloric acid, and always enjoins the regular use of weaker gargles of the same acid. Stimulants, beef-tea, milk, jellies, constitute the dietetic part of the treatment.

The discussion of the ALBANY COUNTY MEDICAL SOCIETY resulted in recommending emetics, to cleanse the stomach and fauces of vitiated secretions, gargles of diluted vinegar, and the mineral acids and tonics very early in the disease to counteract the tendency to the typhoid condition. Chlorates of potassa and soda were only mentioned in reference to their use as gargles ; their internal use was not discussed.

In Mr. FOURGEAUD's opinion, diphtheritis is merely a local affection. He is opposed, therefore, to Mr. BLAKE, who considers, with the majority of modern writers, the main thing to be the diphtheritic fever, and all the sometimes severe and sudden symptoms pointing to dissolution of the blood. If diphtheritis was only a local process, the accompanying fever, the general debility, and miasmatic expansion, could not be well explained. Fourgeaud's opinion in this respect, as well as his therapeutical treatment show him to be well acquainted with the older literature, but entirely ignorant of the results of late years. While fully agreeing with his expositions on the application of muriatic acid and nitrate of silver, while further fully admitting the danger of performing tracheotomy in secondary croup, we entirely disagree on the antiphlogistic, local and general, treatment recommended by the author ; for we have no doubt, that the general debility and dissolution of the blood will not be prevented or cured by antiphlogistics and purgatives, and that local bleeding in cases of tumefaction of the throat, and the submaxillary glands, will do good in only very few cases. A tonic, restaurant, stimulant general treatment (together with the almost specific antidiphtheritic remedy, chlorate of potassa), and stimulant embrocations to the neck, have proved more useful and appropriate. The author not being acquainted with the use of chlorate of potassa proves by this very fact, that he is not acquainted with the results of scientific researches and experiments of the last three or four years.

Mr. THOMPSON is inclined to adhere to the opinion, that diphtherite may be a modification of scarlet fever. "The following are the reasons for considering so : 1. Diphtherite prevailed in this neighborhood as a contagious epidemic at the same time as well marked scarlet fever, and chiefly among children. 2. In the same house the father and mother had well marked scarlet fever severely, without any ulceration or deposit on the throat ; while the three children had all the marked symptoms of diphtherite, without much feverishness and no rash, though attended by the same premonitory symptoms ; the cases occurring at the same time. 3. In many instances, cases of apparently pure diphtherite were, after some days, attended by a rash, that seldom remained more than a few hours. 4. The disease in most instances commenced with all the symptoms of fever, its duration being similar to that of scarlet. 5. In cases of apparently

pure scarlet fever, the throat became, after a few days, covered with a diphtheritic deposit. 6. The sequelæ of the two diseases nearly resembled each other. Albuminous urine, with casts, being present in eight cases of diphtherite; and anasarca proving fatal from convulsions in one."

Dr. SEMPLE is much opposed to the assumption of an identity of scarlet fever and diphtheritis. The onset in the cases he observed, was very insidious; the diphtheritic membrane had often reached the air-passages before advice was sought. Death ensued from asphyxia, but in many more cases from exhaustion.

The principal fact Mr. WADE lays stress upon, is the presence of albumen in the urine as a common symptom; then he goes to show that neither the false membrane, nor the fatal croup, ought to have induced Bretonneau to consider diphtheritis a new disease, and pathologically different from scarlatina. As to the initial fever, he rightly observes, that the stage of reaction bears no relation in intensity to the stage of depression (or rigors); that the initial fever, though frequently slight, bears no relation whatever to the amount or extent of the exudation on the fauces. Sometimes Mr. Wade has found a certain diminution of the general symptoms, with the first appearance of the exudation. Mycelium and *Oidium albicans*, as found in the exudate membrane, by Dr. Laycock and Mr. Jauncey, he did not find; but in one case he saw the *leptothrix*, which, however, is common in various forms of disease. As to albuminuria in diphtheritis, the author thinks too much of its importance and dangerousness; it being indeed a very common symptom in the first stage of diphtheritis. Mr. MANGIN has proved, moreover, that albuminuria, wherever found, accompanies the first stage of diphtheritis, while in scarlet fever, it is seen with or after desquamation. Besides, according to his experience, albumen is found in almost all the cases of diphtheritis, and always in large quantities, while it is not seen in the majority of cases of scarlatina, and never in a large quantity. Cutaneous eruptions may be found from several causes. Either they take their origin from a former disposition, or are like the erythems observed in cases of virulent or miasmatic poisoning, or the skin is simply congested by the general fever. Such eruptions, then, in Mr. Mangin's opinion, are never peculiar symptoms of diphtheritis.

Dr. LAYCOCK compares diphtheria and muguet, and endeavors to show that either of these diseases is due to the presence of a parasitic fungus on the surface of the mouth, fauces, and other mucous structures. The sporules and mycelium of the *oidium albicans*, which are, besides in diphtheria, found also in muguet, act as an irritant, inducing increased formation of epithelial scales and effusion of mucous exudation corpuscles, or plasma; intermingled with these, are the sporules, and the mycelium of the microscopic fungus; the whole constituting a pellicle. This fungus, however, appears not to be limited to one form of disease. Dr. Laycock has had a case of syphilitic disease of the fauces and pharynx, in which the pellicle containing the *oidium* was noted, and which seems to have introduced it into the clinical wards. Whenever there is an epi-



demic of scarlatina, the presence or absence of the fungus, in each individual case, will decide on its character, whether diphtheritic or not. The condition of the intestinal and bronchal mucous membranes seem to be not very favorable to the formation of the mycelium; or a pellicle; still inflammation, and even ulceration of these surfaces, will occur as the result of the irritative action of the parasite. In diphtheritic croup there is no mycelium, either because the weather is cooler when it prevails, or because the mucous membrane of the larynx and trachea, being cooler generally, from the transit of air, is less favorable to the development of the mycelium. The fungus, however, may fix upon any suitable portion of the skin, thigh, labia, malleoli, and angles of the eyes and mouth. The diagnosis from ordinary aphtha is not difficult; this latter disease is vesicular, and the white specks or patches are ulcers, while in diphtheria they are pellicular, and not ulcerous. The redness, too, is much deeper in diphtheria, and there is no oïdium in aphtha. The indications in the treatment are given by the constitutional condition, which is always low and asthenic tonics, stimulants, antiseptics; and by the local affections, in which the remedies called parasiticides are the best; biborate of soda, chlorate of potassa, bichloride of mercury, any metallic salt; particularly perhaps, chlorides, alkaline gargles and applications, nitrate of silver. Diphtheria, as due to the oïdium albicans, is infectious and contagious.

MR. WILKS endeavors to show that a vegetable fungus may spring up on the buccal mucous surface in various cases of diseases, but requiring, probably, some previously morbid condition for a nidus; but that the pellicle in diphtheria is *always* composed of a vegetable parasitic fungus.

The result of Dr. HAUNER's observations on diphtheritis are laid down in the following, viz.: Diphtherite generally, and diphtheritic angina and laryngitis particularly, are originally observed in feeble children and such as have been suffering from preceding (mostly exanthematic) diseases. It is contagious and infectious; may kill either by intoxication, or exhaustion, or secondary affection of the larynx, trachea, or bronchi; and will never be cured by antiphlogistic treatment, but only by roborants and local treatment. Dr. Hauner applied in all his cases the solid caustic to the tonsils and fauces, sometimes using a strong solution of it, and always sufficiently to form a line of demarcation between the diseased and the healthy parts. The internal treatment consisted of chlorate of potassa, 3ss. or i. daily, quinine, and a roborant diet. Aromatic baths proved useful.

MR. KINGSFORD publishes a very judicious essay on diphtheria, dividing it into a mild form, viz., diphtheritic sore-throat, and a severe one, viz., genuine diphtheria. This latter is highly dangerous. No antiphlogistic remedies must be adopted; it should be borne in mind that the fever is the result of a poison analogous in type to adynamic erysipelas. The pharynx should be sponged every 8 hours with a solution of lunar caustic; a most liberal allowance of wine and nutritious diet must be instituted from the first, and the following draught: chlorate of potassa, 10-30 grains; tinct. of sesquichloride



of iron, 10-30 minims ; syrup, 1 drachm ; water, 7 drachms ; given every one, two, or three hours. The more intense the inflammatory symptoms, the oftener should the draught be administered ; nourishment also should be given in intervals. Cases in which deglutition is impossible, or voluntary efforts at swallowing are resisted, require clysters of beef tea and port wine every two hours in older children, combined with quinine. At the same time the topical application of the nitrate of silver must be persevered in ; no mercury must be given except as a cathartic at the onset of the disease ; no blistering and external stimulants applied, they being worse than useless. Tracheotomy, if entertained, should be entertained immediately after the croupous symptoms have become established, and not deferred as a *dernier ressort* ; the author does not say whether he ever saw a successful case of tracheotomy in diphtheria. When the affection of the throat assumes the malignant or putrid type, a gargle ought to be added, consisting of one drachm of liquor chloride of lime and 8 ounces of water. A very serious complication, in severe forms of diphtheria, is paralysis of the muscles of the neck, of the pharynx, and of the larynx ; such cases require change of air, and those remedies which are calculated to improve the general health ; the nervine tonics are especially indicated.

Prof. BOUCHUT, of Paris, has done to his utmost during the year to undermine what reputation he has obtained by former labors. In his opinion the false membranes will be best removed by emetics, or by cauteries, of which he would prefer the hydrochloric acid to nitric acid, nitrate of silver to the actual cautery. He generally applies glycerine, which is expected by him to dissolve false membranes, when not too hard. Of internal remedies he is, rightly, afraid of mercury ; but he sins as much as those who recommend mercury, by praising divided doses of antimony. Of chlorate of potassa, he declares to have seen no effect whatever. So far, all may be right ; but, finally, he goes as far as to praise the excision of the tonsils as an infallible remedy in cases of diphtheritic membranes.

Dr. BARON recommends carbonate of soda or the Vichy waters.

A case of hydrophobia observed by Prof. SANTESSON, of Stockholm, occurred in a girl eight and a half years old. The disease showed itself on the forty-fifth day after the child had been bitten, and resulted in death after two days' intense suffering. Post-mortem examination eighteen hours later : considerable rigor in the maxillar joints, the joints of the lower and particularly the upper extremities being somewhat more flexible. When the external integuments were being incised, there was a smell of chloroform, which the child had inhaled before death. The inner side of the galea, corresponding with the spot where the child was bitten, had its blood-vessels pretty much injected with blood ; also the cranium was, in the corresponding part, somewhat exfoliated. The cerebral membranes were normal, the venous vessels of the arachnoide, particularly on the basis, abnormally filled with blood. The cerebral substance was normal, a little hyperæmic ; the lateral ventricles contained some clear serum ; the choroid plexus of the right lateral ventricle was somewhat extended by serum. When the thorax was being opened, the lungs

did not collapse; after an incision was made, a large quantity of dark fluid blood effused, the right lung adhered to the thoracical pleura by old adhesions; its middle lobe was almost entirely collapsed; the bronchia, in this part, were dilated and filled up with a purulent liquid. On the outside of one of them was a calcareous concrement of the size of one half of a pea. The mucous membrane of the larynx was pale, of the trachea red, and everywhere below the bifurcation, in all the bronchia, highly congested. The left lung showed interlobular emphysema. The heart was normal and contained liquid blood and fibrinous coagulations. The mucous membrane of the fauces was not particularly injected; the tonsils were swollen; when incised, a purulent fluid escaped. The superior surface of the tongue was pale and covered with some mucus; the inferior surface showed no blisters of any kind or size. There were some erosions on the mucous membrane of the stomach, particularly near the pylorus. The intestines and spleen were normal, liver and kidneys normal, but hyperæmic.

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Dr. NEUDÖRFER, after mentioning the well-known fact that the cicatrice, after the operation for hare-lip, does not keep pace with the growth of the upper lip, recommends transversal incisions through the wound in order to elongate the cicatrice to the full length of the lip. Dieffenbach is well known to have, for the like purpose, separated the margin of the lip from the alveolar process.

ALLEN DUKE operated on four children, whose ages varied from six weeks to five months, in the following manner: "The edges pared, not in the usual way, but by an oblique incision from before backwards, slightly concave, and the reflecting bands of mucous membrane, freely divided, are to be brought neatly together by two or more sutures, each armed by two curved needles, which are to be introduced immediately under the skin, carried completely through the remaining thickness of the lip, and firmly tied *internally*. To facilitate the removal of the two upper ones, the ends of the sutures should be brought out at the angle of the mouth, and secured externally by adhesive plaster, strips of which are to be applied the more firmly to bring and retain in contact the skin. The sutures may be safely removed in the course of a few days. Should there be a fissure of the jaw, and any portion unnaturally project, it should not, as is usually recommended, be entirely cut off, but partially severed, the edges pared on both sides, and neatly adjusted by sutures, in order to fill up the vacancy, and preserve the natural rotundity of the forepart of the jaw, previously to operating on the soft parts."

Prof. GUERSANT declares the result of operating for simple or double hare-lip, at any age, to be almost always favorable, of operating for complicated hare-lip only exceptionally successful; but almost always unsuccessful whenever a complication supervenes in the shape of disease of the skin or some other part. He usually does not operate until 6 weeks or 2 months after birth, some newly-born infants having died after the operation, being unable to take food. Moreover, a considerable number of children die within the first 2 months, even without having undergone any operation; the loss of blood, too, in the operation for complicated hare-lip, is more than many children bear. For some time past Prof. Guersant has employed separate points of suture, having found that they less easily cut through the lips of the wound than the twisted suture. As to the inability of taking food, Prof. Guersant appears to be somewhat mistaken; at no age privation of food is less inconvenient and dangerous than in the

newly-born. Moreover, the process of suckling does not at all interfere with the wound of the upper lip.

Prof. BUSCH, in his book on "Surgical Observations" (1854), directed the attention of the profession to the fact, that infants, accustomed to breathe while the mouth is closed, through the large abnormal opening, keep the mouth closed also after the operation is performed, and are subject sometimes to fits of suffocation. Such a case is reported by Prof. VOLKMAN; it resulted in the death of the patient, a boy of one year of age. Dr. Gurlt has seen similar cases.

Dr. TAMELE publishes some practical notes on and rules for the operation of split palate.

A case of congenital hypertrophy of the tongue, and amputation of the diseased parts, was reported by Dr. MORROGH, of New Brunswick, N. J., and occurred in a girl, seven years old. At birth the hypertrophy was moderate, but it had increased more or less rapidly till reaching its present dimensions; the tongue was found protruding two inches outside the jaws. It measured two inches across the teeth, and was of a corresponding thickness. The papillæ of the protruded portion were enlarged, and the mucous membrane was thickened and indurated. On the under surface was a ragged, hard ulcer, produced by the pressure of the teeth. These were pressed forward considerably out of their natural position. The horizontal rami of the inferior maxilla were curved downwards, so that, when the molar teeth came in contact, a space of about one inch remained between the upper and lower incisors. By this the girl was able to masticate and swallow without difficulty. After the example of Dr. Harris, of Philadelphia, who, after endeavoring to amputate in a similar case by ligature, in 1829, performed the same operation in 1835, by a double flap incision, checking the hemorrhage by ligature, Dr. Morrogh operated by removing a V shaped portion from the anterior middle part of the tongue, and ligating the ranine artery. Although copious hemorrhages followed, the patient went home well on the sixth day after the operation.

Mr. MOORE reports the case of a boy, of  $4\frac{1}{2}$  years, who had suffered severely from spontaneous salivation for a month. No cause of this salivation could be found; there was no tumefaction of glands, no affection of the tongue, no calomel taken. After taking for awhile chlor. pot. gr. iii., and tinct. catechu gtt. viii. every two hours, he recovered.

Mr. Rousse says, that in cases of ulcerous inflammation of the gum, where antiscrophulous treatment seems to cure but with the loss of the teeth and alveolar processes, he has repeatedly seen a rapid cure follow but 4 applications, by means of a brush, of perchlor. of iron.

Muguet is said by Mr. GUILLET to be cured in a simple way, by rubbing off the deposits from the mucous membrane of the mouth and slight cauterization of the diseased parts with the solid lunar caustic.

The principal facts of Dr. GUBLER's careful investigations are the following: The concretions of pultaceous appearance, known by the name of muguet, are constituted by a fungus, the *oidium*

*albicans*, which is developed from sporulæ-disseminated in the atmosphere, and deposited at the entrance of the organs of digestion. Thus infection may be transmitted by the air, or the fungus spread by direct transplantation from one mucous membrane of the mouth to another. But it will not always develop itself with equal readiness, certain conditions being required, as diseases of the organs of digestion in children, or tubercular phthisis, typhoid fever, or angina in adults. In all these affections, the mucus of the lining membrane of the mouth is sour instead of alkaline ; such, then, is at least one of the conditions on which the existence and development of *oïdium albicans* depends ; easy access of air, too, is required. The fungus is mixed up with mucous concretions, particles of food retained in the mouth, and the epithelium of the mucous membrane. This strange composition is only superficial, does not penetrate into any tissues, and does not affect circulation. Thus the production of muguet is a simple accident, and has no particular connection with the affection it is found to be complicated with. After all the foregoing remarks, it is of therapeutical importance, to avoid the neighborhood and the contact of individuals attacked by the cryptogame, to remove the morbid masses by mechanical means, and to wash the diseased parts with strong alkaline solutions.

In the summary of the transactions of the College of Physicians of Philadelphia, a light case of noma is recorded by Dr. CORSE. Mr. MONTGOMERY reports the case of cancrum oris occurring in a girl of from four to five years of age, which was almost entirely left to itself, and naturally proved fatal.

The case of fibrous tumor, developed within the lower jaw of a boy of nine years, related by Mr. Bryant, is remarkable for the entire absence of pain.

Dr. MAGITOR is of the very rare class of Frenchmen, who confess that a thing may be done or understood better elsewhere than in France. While he found, in England and Germany, a large number of treatises on the development and structure of teeth, he regrets to say, that he has found but a small number of articles on the subject in France, and these, too, under the influences of old and antiquated doctrines, and with only a very incomplete knowledge of the results obtained in foreign countries. For this reason, he quotes largely, Owen, Nasmyth, J. Müller, Purkinje, Schwann, Kölliker, etc. He considers the development of the dental substance during the embryonic period ; in what he calls the period of actual development, where the elements of dental structure are formed and dispose themselves ; and, finally, in the adult period, where the tooth is entirely constituted. The first part treats of the development and structure of the dental follicle in all its parts, before the production of the hard dental substance has commenced ; the second part comprehends the development of the proper dental substance in the follicle ; and the third describes the elements of the definitive structure of the teeth. As to the original condition of dental structure, he mostly follows the opinions of Raschkow (*Meletemata circa dentium mammalium evolutionem*. Vratislaviæ 1835), and Huxley (*On the Development of the Teeth, and on the Nature and Importance of Nasmyth's Persistent Cap-*



*sule*, in Quart. Jour. of Micr. Sc. April, 1853), only denying the existence of the *membrana præformativa*.

The very best essay on this important disease of the infantile age, as yet published, is from Dr. BOKAI. The main points of his valuable expositions are the following facts : Retropharyngeal abscesses may be classified under three heads. Some are developed idiosyncratically, from an inflammation of the pharynx, and the surrounding cellular tissue, the inflammation taking its origin from either a catarrhal affection, or a metastatic process, under the influence of an acute exanthem, typhus, pyæmia, etc. Another class are secondary, being produced by the suppuration of inflamed lymphatic glands of the neck. The third class owe their origin to the suppuration of cervical vertebræ, or their ligaments. The first class occurs in the majority of cases before, or at the time of the first dentition, this period of life being most subject to idiopathic catarrhal inflammations. The second class are more frequently found about the time of the second dentition, which is most favorable to inflammations of the lymphatic glands, as produced by scrofula. The third class belong, in their majority, to the same age ; inflammation, tuberculous as well as traumatic, being uncommon at an earlier period. The prognosis in cases of the first class, is generally favorable, unless the incision of the abscess be neglected ; with the only exception of metastatic abscesses, which are but symptoms of a more or less grave affection of the whole system ; in these cases, everything depends on the possibility or impossibility of a cure of the morbid crasis of the blood. The cases of the second class are not unfavorable, although they be only secondary, because there is always a hope that a rational treatment of the general disease will be successful. The prognosis of the third class is most unfavorable ; for there is only a momentary relief after the abscess is opened, either artificially or spontaneously. The treatment is to be modified according to individual cases. Idiopathic abscesses, when in their beginning, require a rational antiphlogistic local application of cold, either externally, or by gargling, with, or without alum ; local application of alum or nitrate of silver, leeches, scarifications of the pharynx. When the inflammation cannot be kept from further development, warm poultices will be found preferable ; they may be omitted, and warm emollient gargles given instead, where congestive cerebral symptoms prohibit their further application. Internal treatment is not of much use, except in moderating the fever, cerebral symptoms, etc., especially the tartar-emetic is not deserving of its general warm recommendations. Where the symptoms are grave, and suffocation imminent, undoubtedly the safest and quickest remedy is incision, after which the abscess is to be washed out by gargling or syringing. Metastatic abscesses require incision only where the symptoms are very grave. After it has been made, water would not be sufficient for cleansing and healing the wounds, but stimulants, astringents, and roborants, are always required, such as chlorot. calc., alum, nitr. arg., tann. ac. ; also, the internal treatment has to be modified by the general morbid affection, and bark, mineral acids, etc., will often be found necessary. Secondary abscesses of the second class above-men-

tioned require the same local treatment as idiopathic ones. Where an external abscess originating from glandular inflammation is diagnosed, it has to be incised from outside, in order to prevent, if possible, the formation of a retropharyngeal abscess. At all events, the treatment after the incision of a retropharyngeal abscess of this class will take the more time and care, the graver the general glandular disease, and the severer the dyscrasic dissolution of the blood. Jod potassii, iod. ferri, and cod-liver oil, will often be required. The cases of the third class, offer a large number of indications, but are much less hopeful. Quiet position, application of cold, leeches, ointments of mercury and iodine, calomel, nitr. potassæ, tart. em., iod. potassii, iod. ferr., are indicated, and have been used and abused. The incision ought to be made as late as possible.

PROF. R. VIRCHOW reports the case of an infant, born with ascites and congenital peritonitis. The mother, about thirty years of age, had six children, the first of whom is about twelve years old, and healthy; but the last three died pretty soon after birth, and had, each of them, the abdomen swelled by dropsical exudation.

MR. THOMPSON relates the case of a boy who had complained for some months of abdominal pains, and had been suffering during the last six weeks preceeding his death, from epileptic fits recurring almost daily. The liver was divided into two portions by a large fibrous cyst in its substance, within this was an acephalo-cyst almost filling the fibrous cyst, from which twenty-two ounces of albuminous fluid were evacuated; and one other smaller cyst, containing about two or three ounces. In the fluid contents were numerous echinococci, and hooklets, seen under the microscope.

PROF. LUSCHKA reports the case of a prematurely born male infant, who suffered from loss of blood after the umbilicus had fallen off, and anæmia, and evacuated blackish brown fæces. The liver was of a dirty greenish-yellow color, and very large. A fibroplastic tumor was situated behind the gastro-hepatic ligament, originating, probably, from extravasation during foetal life, into the parenchyma of the liver. The parents were not syphilitic. This case of Prof. Luschka is exceedingly interesting, because independent fibro-plastic tumors (with the exception of fibroid masses in the syphilitic atrophy of the liver in adults), have been found in but rare instances, and never in children.

MR. MORRIS made the examination of a woman of fifty years, who died from granular degeneration of the kidneys; the liver appeared perfectly normal in structure, but instead of occupying the concavity of the diaphragm, it was lying on the right side, so that the left lobe occupied the ordinary position of the right lobe, while the latter was forced downwards and forwards.

DR. MEYER attended for a long time, a boy of six years, who at last died from a phlegmonous inflammation of his right cheek, and carnification of the inferior third of the left lung. The liver was carefully examined and found to contain sugar in uncommon quantity.

MR. SIBLEY records the case of a boy of four years of age, who died with the symptoms of purpura and tubercular disease. Tubercles were found in large numbers in all parts of the lungs, on the

surface of the peritoneum of the liver and spleen, which weighed three and a half ounces. The bronchial glands were converted into masses of soft, cheesy, yellow tubercle; so were the glands in the gastro-hepatic omentum, but the mesenteric glands were simply somewhat larger than usual.

Of 2,577 children treated in Dr. HAUNER'S dispensary, more than 1,000 suffered from diseases of the organs of digestion, particularly from gastro-intestinal catarrh, in consequence always of a vitious alimentation. Atrophy and death were no uncommon results. Of 196 deaths, as many as 124 were produced by atrophy.

In the London *Lancet* a case is reported, of what is called death from over-feeding. A female child, æt. 3 months, who had been unwell for several days, died pretty suddenly. It was ascertained that, in addition to the breast-milk, three cups of arrow-root and some milk and water had been given to the child, and death was attributed to the fact of the stomach being unable to relieve itself of the mass. — *Verdict*: "*Died from natural causes.*"

Mr. WALLACE observed the case of a new-born infant, in which "the stomach and intestines, except a portion of the rectum, were found external to the abdomen, protruding through an opening about two inches long, by the side of the umbilicus." The infant died the following morning.

A penetrating wound of the abdomen, produced by a pair of scissors, and protrusion of the bowels, has been observed by the physicians of the Royal Free Hospital, London, in a child of five years. The result was fatal.

Dr. MASCHKA reports the case of a child, in whom, after having been alive for two or three days, the stomach was still in a vertical position. Thus the position of the stomach can no longer be taken for a certain sign of the life or death of a child, at the time of birth. Another case shows the diagnosis of lungs swimming in water, after the child lived, and such as have been inflated by putrefaction; the latter sinking in water after the vesicles have been opened and the lungs slightly compressed. This same case even shows some other particulars of great importance; there were sugillations in the lungs, which the author says, have always been taken as a certain proof of the child's life, whereas, the child was not only dead, but had even undergone putrefaction when born. (See, however, p. 154.)

DRS. WILLSHIRE'S and COOPER FORSTER'S case of fistula between colon transversum and umbilicus occurred in a boy of five years, who had some three weeks before, an abscess between colon and the abdominal integuments. Fæces were excreted directly from the transverse colon, through the fistula, only very little being evacuated through the anus. Occlusion by a plastic operation was readily effected, only a small aperture, scarcely large enough for a probe, remaining.

In one of the Children's Hospitals of Vienna, numerous experiments have been made with pepsine. The mode of preparing this remedy differs greatly. One of the drugs experimented upon, consisted mainly of the parenchyma of the ventricular glands, and contained a large quantity of mucus matter, mucine, which gives a tough mass after being influenced by acetic acid. Besides, there were found in

it, remainders of plants, fungi, stony matter, and an egg of a helminth, belonging to the stomachs of swine. Even in the recently made preparations, Dr. WEDL found fungi. Other kinds of pepsine contain a great per centage of amylum, to preserve the drug from putrefaction, and to have it always as an equal mass.

The reporter says that the experiments do not prove, hitherto, any healing effect of the pepsine, given pure and as powder, in dyspepsia of children and its consecutive sufferings. Neither does "pepsine whey" seem to be promising of much more effect; the results of the observations made on this preparation may be comprehended in the following: 1. Older children (of from 3 to 6 years), and such as did not keep in bed, tolerated pepsine whey pretty well, and relished it somewhat; their appetite appeared not to be diminished. Younger children, and such as were kept in their beds, threw it up again, even when given in smaller doses. When such was the case, the children did not want to take it again. 2. Such of the whey as had a manifest nauseous taste after the preparation, was usually brought up again. 3. Convalescence appeared not to be aided, in any remarkable degree, by the use of pepsine whey. 4. It was generally less relished and tolerated with more difficulty, than cow-milk. 5. Such a healing effect, as is sometimes seen and usually expected from drinking whey, in bronchial catarrh, particularly in the progress of tuberculosis, could not be observed. 6. Nevertheless, if there ever is an indication for the use of whey in diseases of children, the pepsine whey, prepared without the nauseous taste of the drug, will likely be found more wholesome than the common *serum lactis*.

Of Dr. GUERDAN's book on diarrhœa and gastromalacia of children, a second edition has appeared. The author expresses the same opinions as in his first edition, on the reality of gastromalacia and on its nature, considering it to be the consequence of a beginning leukæmia (Virchow, leukocythæmia, Bennet), of a retrograde metamorphosis of the elements and proteinous substances. As specific remedies, he again recommends acet. plumb. and chlor. oxydul. ferri, in a highly unchemical and injudicious composition. His anatomical knowledge appears to be dubious, his pathology somewhat old-fashioned, his belief in the ignorance or credulity of his readers enormous, his diction neither accurate nor proper, and his natural calling certainly not that of a medical writer.

The little book of Dr. HEXAMER, who, we are sorry to state, has since died in this city, is a clear and true exposition of what the public ought to know on cholera infantum. The author does not at all pretend to offer a new book to the medical profession, but expects to find his readers in the public at large. We have considered it as our duty to recommend the book to the public in a widely-read paper, and we again state our conviction of its value, as a tribute to the memory of the deceased.

Dr. GHOLSON's treatment of cholera infantum is not at all new, but good things may be repeated more than once. He individualizes, as every rational physician ought to do, according to the stage and gravity of the disease, and the strength and general health of the patient. In mild forms, sugar of lead, calomel, anodyne injections,

and tannic acid ; in more advanced stages, adstringents possessing tonic properties, as logwood, ratany, catechu, and a very cautious use of mercury and narcotics, are indicated ; in cerebral affections, with due regard also to some epidemic type, anæmia is to be considered as most dangerous, and to be removed by quinine, stimulants, etc.

He lays particular stress on the fact that, the disease being not at all confined to the United States, in order to explain the universality of occurrence, we must invoke the agency of those physiological changes which dispose so inevitably to certain diseases at certain periods of life. He further considers the simple uncomplicated follicular affection as the normal type of the disease, and, therefore, he recommends, in the early stages, minute alterative doses of sugar of lead, calomel, and bicarbonate of soda. Real inflammation does not belong to the usual and single symptomatology, and requires the greatest caution when an antiphlogistic plan of treatment is resorted to ; hydrocephaloid symptoms being a frequent consequence of inanition.

DR. REDD'S deductions are, that "cholera infantum is simply an atonicity of the sympathetic plexus or nervous centres, induced by the oppressive influence of a highly negative electrical atmosphere."

DR. SMITH publishes 11 short reports of autopsies made on children who died of cholera infantum, from which he draws the following conclusions—1. That the stomach, though so irritable in the disease, and the liver, in the few instances in which it was examined, did not present any notable alteration from the healthy state. 2. That in all the cases there was well-marked intestinal inflammation. Two died when only five days sick, and yet in both the descending colon presented the inflammatory lesion in a high degree. 3. That the inflammation was not confined to the mucous follicles, but extended in patches over the mucous surface. 4. The portion of the intestinal canal in which the inflammation was not intense, was in all the patients the descending colon, and colitis was the only lesion invariably present. While fully acknowledging the scientific value of Dr. Smith's observations, we would remind the author that, from the results of post-mortem examinations like his, we are by no means entitled to draw conclusions on the nature of cholera infantum in general. A large number of undoubted cases of infantile cholera yield not the least morbid traces in the corpse, as we have seen ourselves in many instances, to say nothing on the difficulty to find the anatomical basis of catarrhal affections existing during life. But it is true that about the time when Dr. Smith made his post-mortem examinations, we have repeatedly met with like pathological anomalies.

DR. SCHULLER is of the opinion that calomel,  $\frac{1}{4}$  grain every third hour, is a remedy, where there is no fever, in the diarrhœa of infants under one year of age, who are or have been nourished by breast-milk ; experience in hospitals, on children artificially fed, gave a negative result. Calomel has the favorable effect, which has just been stated, only while the diarrhœa is beginning. If it has not been successful in stopping diarrhœa within 24 or 48 hours, it is of

no use, and has to be discontinued. Vomiting, while calomel is given, yields no contra-indication.

Seventeen years ago, Dr. J. F. WEISSE, physician of the Children's Hospital of St. Petersburg, recommended for the first time raw beef, scraped, as the best remedy against the diarrhœa setting in after weaning. He repeats his recommendation as warmly now, as it has been given in former years, referring to his own experience and the approval of a great many well-known observers. It is a remarkable fact, and worthy of being communicated, that many of the children cured by the use of raw beef, had subsequently *tænia solium*, which is not usually found at St. Petersburg, but which, according to D. von Siebold (*On Nematodes and Cystici*, Leipsic, 1854) is introduced into the Russian capital by Podolian oxen.

This experience ought to make practitioners careful as to the use of raw beef when unnecessary. We have been ourselves under the necessity of attending for *tænia* a child of from four to five years, whom we prescribed the free use of raw beef some years ago.

Under the name of choleric form enteritis of the newly-born infant, Dr. RICORDEAU describes a disease, easily diagnosticated from catarrhal diarrhœa, cholera morbus, and dysentery, by the greenish or serous diarrhœa, high fever, coolness of the skin, senile expression of the face, retention of urine, and partial, seldom general, cyanosis. High temperature, bad air, and unappropriate food are among the principal causes. In the first two weeks of life it is always a fatal disease, neither emollients, nor antiphlogistics, nor local nor cutaneous revulsives, nor opiates, nor tonics and adstringents, nor absorbents being of any use whatever. The nature of this disease Dr. Ricordeau considers as merely inflammatory, sometimes stomach and the small intestines being injected, sometimes normal, but the large intestines showing always inflammatory alterations and swelling of the follicles.

Dr. LEDERER states that infantile marasmus is the consequence of a great number of organic diseases. The one consequent on chronic intestinal complaints must be distinguished from that following on tubercular degenerations of the mesenteric glands, etc. The cause of enteric atrophica is either a simple chronic internal catarrh, or follicular catarrh, or enteritis choleric formis (*cholera infantum*), or, in a very few cases, dysentery, of which infants in early age usually die in an early stage. Extreme emaciation, diarrhœa, pain, and sleeplessness, are the most common symptoms, besides most craving thirst and hunger. These are of a diagnostic importance, being not found in the other kinds of marasmus; nevertheless, the stomach and intestines are not sufficiently powerful to digest. Absence of fever is characteristic, so much so, that feverishness is usually a prodrome to cerebral or other complications, of which the most common are: cerebral or pulmonary stasis, otorrhœa, tumefactions of the glands, abscesses, furuncles, and hooping cough. Milk is not always tolerated, and is seldom so in large cities. Dr. Lederer then prefers to give beef tea, without spice, but with some sugar; sometimes, where diarrhœa is present, with rice water. Veal soup generally causes or aggravates diarrhœa; so does veal. Raw

beef is digestible in the first stage of the disease only ; carrots are rather injurious. Baths, mixed with milk, beef tea, and embrocations, with fats, have a good effect. Diarrhœa requires the use of nitrate of silver, nux vom., and tannic acid. Whenever pain and sleeplessness are injuring the strength and the favorable course of recovery, a cautious use of opium ought to be resorted to.

Dr. KUTTNER, of Dresden, publishes some valuable remarks on what he prefers to call dystrophia of infants. Genuine dystrophy, pædo-dystrophia, pædatrophia, is the low state of nutrition and the general exhaustion, which are caused by insufficiency of food, either as to quantity—simple dystrophy—or as to quality—dyspeptic dystrophy. This genuine dystrophy differs much from the cases of emaciation and exhaustion which are merely symptomatic, and the secondary consequences of some local affection of the digestive or respiratory organs, or of syphilitic or tuberculous, etc., dyscrasies ; in dyspeptic dystrophy the author recommends, as a tonic and stomachic, from eight to ten drops of Malaga, Hungarian, or Port wine, to be taken three or four times a day.

In cases of diarrhœa of children, combined with putrid decomposition, Drs. F. J. BEHREND and SIEBER, of Berlin, have administered large doses of Sugar, with good success (*Journ. f. Kinderkr.* 1857. 1, 2). The sugar is expected to develop, in the digestive organs, its antiseptic nutritious, and fat-forming qualities. Mr. MOORE, of Dublin, reports a very successful case of this kind in a boy of sixteen months. The doses of sugar were about two teaspoonfuls every two hours.

MR. CABARET availed himself of Le Pelletier's method to replace a long piece of the colon prolapsed through the anus, with complete success, by pushing the whole prolapse at once upwards by means of an elastic sound. The patient, a feeble boy of two years, recovered.

Dr. A. MERTENS, publishes four cases of perforation of the vermiform process, all them resulting in the death of the patients. They occurred in males of 9, 18, 4, and 5 years of age. The cœcum took little or no part in the disease, just the reverse of what Copland reports to have occurred in his cases (*Dict. of Pract. Med. Art. cœcum*). The majority of cases reported in the medical journals occur in young persons. The usual result of foreign bodies lodging in the vermiform process, is death, in consequence of a very dangerous reaction following, which fact proves by itself, that the process has a function of its own. The author is inclined to attribute to it a function analogous to that of the pancreas ; it is said to complete the cœcal digestion in a similar manner, as the pancreas completes the duodenal one. He believes that he has found, on the cœcal part, bundles of circular fibres, constituting as it were an orbicular muscle.

Dr. G. T. ELMOT, publishes the case of a boy of 11 years of age who died of peritonitis with perforation of the appendix vermiformis. A foreign body removed from the vermiform process was found by Dr. ALONZO CLARK to be formed by six distinct layers, which like those of the tornea, were susceptible of further division ; these inclosed a nucleus, somewhat larger than a mustard seed, formed of condensed



fecal matter, and the refuse of food. The layer immediately enveloping this nucleus displayed under the microscope very numerous fragments of the pericarp of wheat, with spirial vessels of the raspberry seed, and the spines from that or the strawberry seed, hardened by calcareous matter which effervesced and disappeared under the mineral acids. The other layers were similarly composed of condensed fecal matter, hardened by the calcareous deposit, and the outer shell was roughened with slightly projecting, uneven elevations with whitish spots. Under the scalpel, the whole gave a grating sensation ; and on exposure to the air soon lost even its former comparative flexibility; and on section, looked not unlike a calculus.

DR. ELLIOT, at the same time avails himself of the occasion to recommend the use of opium in peritonitis of children in a similar manner as it is administered to adults.

PROF. CLAR, of Gratz, publishes several essays on the pathology and therapeutics of some of the most important diseases of the infantile *intestinum crassum*, of which the following is an extract : Catarrhal diarrhœa, during dentition, especially where some cerebral or pŭlmonic affections are present, ought not to be suppressed as long as a derivation is desirable, and the child does not suffer from impaired nutrition. If such is the case, or a catarrhal diarrhœa is continuing, without symptoms of difficult dentition, injections of salep, starch, alum, tannic acid, with a small quantity of opium, are indicated, together with the internal use of ipecac., tinct., cat., ratanh. Injections, sometimes emollient, sometimes astringent, have also to be employed in the protracted catarrhal affections of the *int. crassum*, in anæmic, scrofulous, rachitic children ; most successful are injections of solutions of tannic acid or nitrate of silver. In general it may be stated, that Prof. Clar lays more stress on the importance of injections in infantile diseases than has ever been done. His desire to publish his experience, and to recommend such a simple mode of administering medicaments in diseases of the lower intestines, cannot be too much praised. Children with follicular ulceration range from some months to some years of age ; they are anæmic and atrophied, their hands and feet infiltrated with serum, as well as their cerebrum, the repeated œdema of which is a usual cause of death. There is bronchial and pulmonary catarrh, sometimes the lungs are œdematous, but in the majority of cases, full of air, and bloodless ; the liver is somewhat enlarged, filled with serous blood, the spleen pale and small, the mucous membrane of the stomach and intestines covered with a tough and viscid mucus, and in some parts of a grayish color ; on the mucous membrane there are the peculiar solitary and blueish spots (almost similar to pale sugillations), which show, in their centres, small ulcerations, with the follicle somewhat excoriated, and of a looser tissue, sometimes even without a follicle being present at all. The progress of this disease is, generally, this: The first cause has been bad food, and insufficient care ; pulmonary and bronchial catarrhs, of great obstinacy, impaired the sanguification ; the catarrh and follicular ulceration of the *int. crassum* accelerated the consumption of blood and strength, and, finally, the cerebral or pulmonary œdema, or both, resulting from the great



exhaustion, produced death by means of cerebral or pulmonary paralysis.

On colitis crouposa, Prof. CLAR, gives the following particulars: Colitis crouposa must be suspected wherever a young and feeble infant is suffering from a diarrhoea, which shows neither the catarrhal nor the dyspeptic characters. The evacuations are mixed with small points and stripes of blood and exudated matter, even pseudo-membranes; the pain is manifestly following the direction of the colon; urine is easily passed, although the symptoms may be similar to those of cholera neonatorum. Moreover, it is to be kept in mind, that a genuine dysenteric process, producing similar excretions, occurs but very seldom, if at all, in so early a period of life. Whenever the colitis is idiopathic, and not the consequence of pyæmia, local treatment appears to be most successful. Injections of cold water, or emollient liquids, with or without laudanum, and in severe cases, from a quarter of to a grain of nitrate of silver, dissolved in two or three ounces of water, form the better and principal part of the medical treatment.

The same author describes three different classes of dysentery, of which one may be, in some cases, only a preceding or consecutive stage of others. There is, 1st, a light erythematous dysentery; 2d, a graver inflammatory affection of the mucous membrane; and 3d, a grave inflammation of the mucous membrane with simultaneous exudation in the sub-mucous cellular tissue, and sometimes inflammation of the muscular tissue and serous membrane. Dysentery, although often occurring epidemically, is rarely observed in the first year of life. Its characteristics are a peculiar excretion of viscid mucus, and yellowish, reddish, bloody, chocolate-colored, even black and gangrenous, fœtid masses; tenesmus; sensibility of the rectum; high color of the orificium ani; collapse; a peculiar expression of the physiognomy, corresponding with the grave abdominal affection, and, in a large number of cases, pain following the course of the colon ascendens, transversum and descendens. The erythematous form of dysentery is rarely observed before, usually after, the third year of life; its symptoms are less severe, but not a few cases occur which lead to rapid death, although the progress of the disease seems slight and mild. Medicaments, introduced by both stomach and rectum, must vary according to the individual case. Emollients and sedatives, sometimes narcotics, will do good in many mild cases. Injections of nitrate of silver, injections of cold water, or of both of them alternately, cold applied to the external surface of the abdomen, sometimes warm poultices, will be found to act successfully. Prof. Clar does not seem to think much of calomel, but very much of antacids. In no disease is it more necessary to individualize, than in dysenteric affections; for now the inflammatory, then the septic character will be predominate; sometimes mild dysentery will be accompanied by the most excruciating attacks of colic; in midsummer, congestion, even metastatic inflammation of the liver, will go along with it; and again, rheumatic affections of the peritoneum may aggravate the number of even slight symptoms of the disease.

It cannot too often be stated, that there is nothing more dangerous

to children than repeated laxatives. They operate once, but only to leave the bowels more subject to constipation than ever. Prof. Clar allows only very few indications for the use of purgatives. Sometimes stimulation is wanted, 1st, of the intestinal mucous membrane; 2d, of the action of the intestinal muscular fibres. The first is effected by injections of soap, sulph. magn., sulph. sod., chloret. sodii, dissolved in water; where any contra-indication forbids the injection of salts, injections of sugar and water will be found useful. In order to stimulate the muscular fibres of the intest. crassum, he recommends dec. tarax., dec. gramin., with an addition of tinct. colocynth, tinct. rhei aq., tinct. rhei vin., tinct. aloes, or a mild inf. rad. jalap. or inf. fol. senn. Wherever, for the last few years, we have met with obstinate constipation in young infants, we have generally succeeded in giving speedy and full relief by ordering some sweet sugar-water to be taken every day, besides the breast. We are satisfied, that the chief cause of constipation in nurslings is the insufficiency of sugar in the breast-milk, the proportions of which are, naturally, not the same with every mother. Wherever casein exceeds the proportion of the other parts of the milk, it becomes indigestible by a relative want of lactic acid in the contents of the stomach and intestines.

Dr. BRINTON attended a boy of eleven years, whose bowels had not been moved for three months, and whose abdomen was forty-three inches in circumference. The rectum was scraped out, and enemata of croton oil, castor oil, turpentine, and gruel, were administered daily, until the abdominal measure came down to the natural circumference of twenty-eight inches.

It has been a general belief, that the meconium consisted of bile, and of the mucus and epithelia of the intestines. But it is certain, according to Prof. FORSTER's investigations, that it mainly consists of vernix caseosa and the colored matter of the bile. Its largest part is obdurate pavement epithelium, like that of vernix caseosa; vernix and meconium are discernible only by the presence of coloring matter, and for a smaller amount of fat in the latter substance. Besides, there is always hair in it from the surface of the body, as it is found in vernix, even without a microscope. Stomach and intestines have no pavement, but cylinder epithelium only; in the mucous membrane of the mouth and œsophagus hard squamous parts, like those in meconium, are not found. The fat contained in the meconium takes its origin from the general surface; cholesterine has probably been a part of the bile. Thus the main part of meconium is vernix caseosa which has been swallowed. Its water is rapidly resorbed, or excreted by the kidneys. Perhaps some part of the fat is resorbed by the follicular glands of the small intestines. The contents of the intestines have not been examined as yet, as to different ages of the fœtus. Acephali have no meconium; formerly this fact was attributed to the absence of bile in consequence of deficiency of the liver; but this malformation would account for the absence of coloring matter only.

The report on umbilical hernia, of Dr. DEBOUT and a special committee to the Belgian Academy of Medicine, contains the following particulars: The umbilical funis, in the commencement of embryonal

life is a diverticle of the abdominal cavity which contains but a small part of the digestive canal ; about the seventh or eighth week the intestinal rudiments hitherto situated in the funis, will enter the abdominal cavity. Wherever this will not occur, the intestinal canal contained in the diverticle will increase in size by the always rapid growth of all the organs, and give rise to congenital umbilical hernia ; moreover, the liver, connected with the umbilical portion by the umbilical vein and drawn downwards, is very apt also to enter, partially, the abnormally large aperture. Thus there are two different kinds of congenital umbilical hernia, viz., such as contain a portion of the intestinal canal exclusively, and such as contain a portion of the intestinal canal and a part of the liver. This latter variety is more favorable than the first one, the entrance into the abdominal cavity being kept open, and the possibility being given of the viscera leaving their abnormal situation. In this case the external integuments of the sac, belonging to the umbilical funis, will fall off after a somewhat longer period than is usual with a normal funis, only the inner membrane remaining, which is connected with the muscles and the peritoneum. This membrane will inflame and become covered with membranous flocculi, will gradually contract, and after spontaneous reposition of the intestines will bring into contact the margins of the umbilical aperture. At all events, the physician's only business is to support the curative efforts of nature in a simple mechanical manner. The other variety, in which only a portion of the intestinal canal is contained in the hernia, and the ring contracted, is most unfavorable. Not one case is known to have resulted in the preservation of life to the infant. Nature certainly will make the same efforts, the external membrane of the funis will dry off, the internal one will contract, but finally, no reposition being effected, break. In all these cases Debout would recommend a surgical dilatation of the umbilical ring, to effect the reposition of the intestines.

Dr. CHAPLIN communicates the case of congenital umbilical hernia, measuring around the umbilical opening seven and a half inches, around its largest part nine, and in its short diameter two and a half inches. The hernia could only partially be reduced, but was not strangulated. Only a moderate pressure was made upon it, under which the hernia was gradually reduced, until, at the age of nineteen months, there was only "at the navel a circular space an inch and a quarter in diameter, formed of close wrinkles converging towards the centre, where there is a prominence of the size of the end of a thimble, and about a quarter of an inch high, with a mark like the cicatrix of an old wound running through it. The whole is covered with natural-looking skin."

Of quite another nature appears to be what Dr. LEOTAND calls umbilical hernia, and asserts to be produced by meteorismus, ascites, obesity, and different abdominal tumors as well in children as in adults. This hernia is apparently but a partial distension of the abdominal walls, into which the intestines will protrude.

Dr. RAVOTH spoke on umbilical hernia, in the Obstetrical Society of Berlin. He recommended the application of collodium. Dr. BRANDT proposed a bandage of india-rubber, not to be applied too tightly.

DR. MOREL-LAVALLÉE reports to have examined thirty congenital inguinal herniæ. In two cases only the testicle was found in the hernial sac. Therefore two varieties of congenital herniæ will necessarily be discriminated, the one in which the sac is independent of the tunica vaginalis ; the other, in which the sac communicates with it.

DR. CLOQUET thinks this latter a more frequent occurrence than Dr. Morel-Lavallée, who found it in only two cases among thirty. In children affected with hernia at the time of birth, the intestine is adjoining, sometimes adhering, the testicle ; but wherever hernia does not exist in the first weeks or months after birth, it is found in a sac not communicating with the tunica vaginalis, the sac being formed, however, by the diverticulum testis of the peritoneum. In short, both varieties of congenital hernia originate in the testicular diverticulum of the peritoneum, with this single difference, that the part of the diverticle forming the hernial sac will communicate with the tunica vaginalis, wherever the testicle descends early, and will not communicate in all cases of the testicle descending at a later period.

DR. RAVOTH, after giving the anatomy and theory of congenital hernia of the inguinal canal, points out the differential diagnosis between congenital hernia and congenital hydrocele. As to hernia, a hereditary disposition can be found in many instances ; continued screaming, or coughing, is usually known as the last cause ; the majority of hydroceles are preceded by some external local injuries ; hence, the testicle is often sensitive and swollen. Hernia descends slowly from the abdomen downwards, hydrocele is observed to slowly ascend. In hydrocele no colic is felt, as in hernia. The hernial sac is easily perceived, by the touch, to protrude into the abdominal cavity, at all events, whenever the diagnosis is doubtful ; it is necessary to look for the continuation of the swelling into the abdominal cavity. The intestine has a peculiar elasticity, the tympanic sound of percussion, the omentum will be diagnosed from the tumor formed by hydrocele. The transparency of hydrocele is difficult to perceive, and does not always exist. Not a few instances are difficult to diagnosticate, because reposition of both hernia and hydrocele is possible. But hernia usually is reduced suddenly, and with a peculiar intestinal sound, while the reduction of hydrocele is more gradual. After a hernia is reduced, the tumor presses on the finger, but is successfully kept back, while hydrocele, after being reduced, will appear anew, from the lower part of the scrotum.

DR. ORIS gives a compilation of forty cases of strangulated hernia in children, the results of which he sums up by the following conclusions : 1. Strangulation seldom occurs in the hernia of childhood, and only in the inguinal variety. 2. The taxis is more frequently successful, in proportion, than in adults. The auxiliary measures should be limited to chloroform, opium, the warm bath, and cold to the tumor. 3. If it is impossible to reduce the bowel, the progress of the symptoms is more rapid than in adults. If you temporize and postpone in children's cases, you will be too late. 4. The mortality after herniotomy in children is less than in adults. Where the operation is seasonably practiced, success is almost uniform. 5.

The extra-peritoneal operation is preferable, when not counter-indicated.

DR. RAVOTH relates the case of a boy of fourteen months, in whom he performed herniotomy two days after strangulation had commenced, when the scrotum was swelled already to the size of a fist. There were but few symptoms other than local ones ; only in the last twelve hours, the food which had been taken, was thrown up again. Chloroform was resorted to during the operation, and for every dressing, which was repeated daily. Dr. Ravoth is fond of applying a truss as early as the hernia is seen. Herniæ in children will descend easily, enlarge the abdominal ring, produce colic, injure digestion and nutrition, and the development of the testicles and spermatic cords.

PROF. ROSER states as a general assumption, that the common umbilical herniæ of infants are produced by a merely local expansion of the peritoneum and formation of a diverticle ; a dislocation of the peritoneum being impossible, because there is no place where it adheres so firmly to the external integuments as in the neighborhood of the umbilicus. The prognosis, therefore, is favorable, as these herniæ are produced by a *visa tergo* only. They heal spontaneously in many instances, are frequent in infants, and rare in adults, with the exception of fat old individuals. During the course of development they undergo obliteration, in consequence of elasticity, or resorption of what was hypertrophied. Such is not the case, in Prof. Roser's opinion, with external inguinal hernia, which is to be considered as an affection that either is, or could be congenital. It is a more frequent occurrence than is generally believed, to meet with the vaginal process remaining open in its superior portion. Almost all the children affected with inguinal herniæ, give evidence of this fact. No less in the bodies of adults, there are hernial sacs met with sometimes of such length and narrowness, that they must be considered as vaginal processes of the peritoneum, the retrograde development of which has been incomplete, and which, probably, never contained any viscera.

DR. RICHARD, induced by the effect of belladonna, in cases of incontinence of urine, prescribed the same remedy to a boy suffering from incontinence of fæcal matters, and put a suppository coated with belladonna into the rectum. Two days after the commencement of this treatment, the child had no more involuntary evacuations. In some other cases, too, the same treatment proved satisfactory.

DR. BERCIOUX, too, employs belladonna in cases of enuresis and involuntary evacuations of fæces in children, where hitherto tonics have usually been administered. He claims almost a specific effect for this remedy, which was recommended more than twenty years ago, but has been forgotten since. He considers the cause of involuntary evacuations to be muscular weakness, either of a local or general nature, and insensibility of the organs. The children suffering from these affections, are mostly pale, scrofulous, rachitical. Tonics, iron, cold, cantharides, secale, are mostly unsuccessful ; herb. and extr. bellad. aa. gr.  $\frac{1}{4}$ , 2, 3, or 4 times a day, was generally successful, even in inveterated cases.

PROF. CLAR remarks that temporary or persistent paralysis of the sphincter is usually observed in children of from eight to twelve years of age, and occurs after exhausting diarrhœa of long standing, after long and continued irritation by worms, and sometimes without any manifest cause. The patients drop their excrements, solid or liquid, while walking. The orificium ani shows a large opening. Cold and copious injections ought to be given and often repeated, and after an evacuation has been effected, a small injection of a solution of tann. ac. in water, with some tinct. nuc. vom. The same treatment may be resorted to in paralysis of the sphincter, complicated with prolapsus recti, after reposition has been performed.

DR. MAGNUS reports the case of a girl of two years of age, suffering from prolapsus of the rectum for two months, the intestine protruding after every passage for one and one-half inches; reposition was not difficult to perform, only the sphincter was loose and flaccid. Mild laxatives, astringents, aromatics, and bandages were used in vain. After  $\frac{1}{12}$  of a grain of the nitrate of strychnia was locally applied in the prolapsed intestine for the first time, it went back by a single touch with the finger. After the application had been made four times, the prolapse did not reappear for some time. It did reappear at a later period, but was entirely cured after, in the whole,  $\frac{3}{4}$  of a grain of strychnia had been applied.

DR. BEREND reports, in the *Annales de la Société médico-chirurgicale de Bruges*, 3 cases of atresia ani, on which he operated in one year. 1. Atresia ani, vaginæ, urethræ. Child died in the night following the operation. 2. Atresia ani, vaginæ. Child died five days after the operation. 3. Atresia recti. Operation in the usual place tried without success. Then an artificial anus was formed. Child died forty hours after the operation.

DR. SCHUPPERT publishes the following cases of imperforate anus— 1. No indication of an anus, lower part of rectum forming an imperforate cord of half an inch in length. 2. Unnatural termination of rectum in the bladder, with total absence of any indication of an anus. 3. Total occlusion of anus, and entire want of rectum. Colon transversum, terminating in the left kidney.

DR. BRYANT operated upon a child of 2 months of age, with cutaneous atresia ani, there being in the occluding membrane a natural outlet so small as scarcely to be seen with the unassisted eye.

DR. ELIN met with a case of malformation of the rectum, in which the anus was perfect, but both the lower and the upper part of the rectum ended in a cul-de-sac.

MR. BARWELL reports a case of imperforate anus, operated unsuccessfully upon, in which the anus was distinct externally, leading into a cavity lined with mucous membrane, which ended, at the depth of an inch, in a cul-de-sac. The intestines were wholly normal to the spot where the sigmoid flexure should have begun, and here it turned upon itself forwards, and ran up again in front of the descending portion to the left lumbar region, then ran across the abdomen in front, and a little below the true transverse colon, descended on the right side, and ended in a pouch in the right flank, with a pointed cæcal end in the pelvis, behind the bladder, about half an inch distant from the external oval porch and to its right side.

In St. Mary's Hospital, London, Mr. LANE operated, for imperforate anus, upon a child, who died 22 days after the operation. The rectum opened into the vagina. The rectum and sigmoid flexure were dilated into an immense reservoir, and capable of containing five pints of fluid. The muscular coat was greatly hypertrophied. This large sac occupied the pelvis, the hypogastric, both iliac and part of the umbilical regions, pushing upwards and nearly hiding the small intestines, concealing the cœcum and the parts of the cœcum in the iliac fossa, pushing the liver up to the third intercostal space, and altering the form of the kidneys.

Mr. JOHNSON operated successfully on a case in the London Hospital for sick children.

Dr. SENFTLEBEN reports 2 cases of imperforate anus, in order to show the reason why so many infants, even after the operation has apparently been successfully performed, die in a short time afterwards. The reason is, that, in a large number of cases, imperforate anus is not the only malformation, the kidneys being usually malformed at the same time.

Very good remarks on atresia ani and uterus bicornis are those of Dr. KRIEGER, with excellent and large citations from literature.

Dr. Hermann Friedberg (*Chirurgische Klinik*, 1855, i. p. 165-224) recommended the method of Amussat, viz., bringing down the gut when an opening has been made in it, and stitching it to the outlet in the perineum. The advantages are that there is a mucous membrane lining the whole tract of the canal; that the evacuations are more easily accomplished; that the natural tendencies in canals, not so provided, to gradually contract, is prevented; that the irritation and danger arising from the contact of effete matter with tissues not intended for such contact is also obviated. Dr. REDFERN DAVIES thinks success more probable by often repeated, almost imperceptible tractions upon the gut, than by trying to bring it down at once. Such is the modification he recommends. The idea has been taken from a case operated upon in a similar way and successfully, which has been described in the *Lancet* of 1846.

Dr. JONES, of New Orleans, reports some unsuccessful cases of imperforate anus, with the object, in the first place, to demonstrate that in obstructions of the bowels from malformations, as from other causes, cathartics are both useless and injurious; and in the second, to establish not only the inadmissibility of all food in similar cases, but this interesting fact also, that, under absolute diet, life may be protracted for a number of days after birth, without the sudden and alarming prostration we are generally led to anticipate. In proof thereof he reports the case of two infants, who were born each with an imperforate anus, and to whom no food was given. One of them died on the eighth day, the other one on the thirteenth day, after birth.

Dr. PAASCH, of Berlin, publishes the case of a child, 21 months old, who suffered for six days, from the symptoms of what seemed to be a severe intestinal catarrh, which were prescribed for. On the following morning a complete tænia, head and all, was removed with the fæces.



According to Dr. MOORE's report, kameela (kameyla, kamala) is the reddish-brown powder which clothes the capsules of the *Rottleria tinctoria*—one of the euphorbiaceæ. Dr. MACKINNON considers it safe as an anthelmintic, and more efficient than turpentine or kousso; 3 drachms is the dose for a strong European, but for a person of more feeble habit half this quantity; this may be followed by a dose of castor oil.

Dr. LEARED also considers kameela to be a very efficient remedy, the effect being produced by a soluble resin, which may be given in the form of pills, or a tincture of the drug may be used.

Mr. RAMSKILL publishes the case of a boy of 18 months, suffering from tænia, who took tincture of kamala, six minims, water, two drachms, night and morning. He asserts that in most cases where the head has been carefully looked for it has been found.

Dr. PEACOCK administered, to a boy of 5 years of age suffering from tænia, 2 doses of kameela (one drachm each) on alternate nights, and castor oil in the following mornings. After the second dose some fragments of the lower part of a tænia was passed quite alive. The medicines were repeated after a week, and again after two weeks. Three hours after the last some portions of the tænia came away, but not the head nor any part near it. Peacock prefers the oil of male fern to either kameela or kousso.

Dr. DIEZ reports the remarkable case of a girl of nine years, who was affected with a fistula of the intestine, a typhous ulcer having perforated and cohering with the abdominal wall. This fistula healed after a fortnight, nitrate of silver having been applied daily. Nine months afterwards the patient complained of pain in the umbilical region, the umbilicus ruptured, and ten living ascarides came forth. The opening closed for a month, ruptured a second time, and again ascarides marched off. A complete cure was obtained afterwards.

Dr. SCHULTZ gives, to obtain a speedy and radical evacuation of oxyuris from the rectum, enemata of 4 ounces of water with from 10 to 15 grains of nitrate of silver. Complete success was obtained after two or three injections.

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#### IV. ORGANS OF CIRCULATION.

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4. Treadgill, H., *Letter to Ed. Nashv. Jour.*—Nashv. Jour. Sept.
5. Peacock, Th. B., *on Malformations, etc., of the Human Heart. With Original Cases*. London. pp. 143, and 8 plates.
6. Williams, C. B. J., *Congenital Deficiency of the Sternum, Rendering Visible the Movements of the Heart*.—Trans. Path. Soc. IX.



7. Hewitt, G., *Persistent Ductus Arteriosus*.—Trans. Path. Soc. IX.—Lancet Jan.—N. Y. Jour. of Med. March.
8. Bochdalek, *Description of a Highly Remarkable Deviation of the Pulmonary Veins in a Boy of Four Days, who Died from Peritonitis*.—Prag. Viert. 4.
9. Armitage, *Rupture of the Abdominal Aorta in a Child*.—Trans. Path. Soc. IX.
10. Stevens, N. C., *Case of Hemorrhage in an Infant*.—Bost. Jour. 20.
11. Behr, *Fatal Injury to a Child in Utero by Rupture of Bloodvessels and Extravasation*.—Henke's Zeitschr., 47th Suppl.
12. Jacob, *Hemorrhage of the Vulva with Discharges of the Mammary Glands and Milky Secretions in a New-born Child*.—Gaz. d. Hôp. Aug. 19.
13. *A very extensive Nævus on the Chest of an Infant*.—Lancet. Jan.
14. *More than a Hundred Nævi in the same Infant*.—Lancet. March.
15. Valenta and Wallmann, *Sanguineous Cavernous Tumor above the Root of the Nose in a New-born Infant*.—Zeitschr. d. Ges. d. Aerzte z. Wien. 14.
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20. Quinlan, *Case of Nævus in the Left Cheek Cured by the Injection of Tannic Acid*.—Dublin Hosp. Gaz. Sept. 15.
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22. Werner, *Seven Cases in which Middeldorpf's Galvano-caustic Method was Employed*.—Arch. f. Phys. Heilk. 1.
23. Neugebauer, L. A., *Morphologie der menschlichen Nabelschnur. Mit 2 Tafeln Abbildungen*. Breslau. pp. 80.—(*Morphology of the Human Umbilical Funis*.)
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25. Lucas, *Strangulations of New-born Children by the Umbilical Funis*.—Casper's Zeitschr. XIV. 1.—Prag. Viert. 4.
26. Newman, W., *Curious Case of Twins, in which the Cord of one Child was Encircled by a Knot on the Cord of the other Child*.—Ed. Med. Jour. July.
27. Jenkins, J. Foster, *Report on Spontaneous Umbilical Hemorrhage of the Newly-Born*.—(Extr. from the Trans. Am. Med. Assoc. Phil. 1858.)
28. Friedreich, J. B., *on the Death of New-born Children by Loss of Blood from the Umbilical Funis*.—Blätter f. ger. Anthropol. III.

Diseases of the heart, in the first two years of life, are usually deemed excessively rare. Amongst the number of cases reported by West, Rilliet and Barthez, Bednar, and many others, there are only a very few which occurred at this early age. There is no doubt, that the diagnosis of organic alterations of the structure of the heart in very young children is sometimes exceedingly difficult; for the impatience, troublesomeness, and screaming of the patients, the frequency of the action of the heart, and the small size of the organ, are very important obstacles. Besides, it must be held in view, that many diagnostic signs are not of the same value in very young children, and in adults. Thus West is of the opinion, that some sounds heard in general anæmia, cannot be referred to the same general cause in the infantile organism, but are to be attributed to some pathological alteration in the structure. Furthermore, it is to be borne in mind, that there are many abnormalities, which, because they once lead to an early death, are heard only in infancy, and aggravate an exact diagnosis because of their multifarious origin. The largeness of the foetal apertures, the presence of extensive atelectasis pulmonum, which will stop circulation in the pulmonary arteries, and force the blood into the left heart, anomalies in the origin and course of the great blood-vessels, are amongst their number. Even the ictus cordis may be misunderstood, and the results of percussion unavailing, because of local atelectasis, which is also, sometimes, a frequent cause of mistakes in explaining the facts found in post-mortem examinations. Sometimes the heart, after the thorax is opened, is visible in an uncommonly large circumference, whenever the lungs are reduced to a smaller volume, is filled with dark blood, and pericardium and thymus are remarkably cyanotic, not because of a supposed disease of the heart, but for no other reason but atelectasis pulmonum. These facts are collected, in a well-written article, by Dr. GEBHARDT, and illustrated by a series of cases: Nevertheless, in his opinion, diseases of the heart, in very young children, are not rare at all. There are many instances of slight thickening of the auriculo-ventricular valves, small hemorrhages in the valvular tissue, small red fibrinous depositions on the valves, and extensive genuine degenerations of the heart, with hypertrophy and its consecutive symptoms. They are very frequently found in infants suffering from, and perishing by, constitutional diseases, as rachitis, syphilis, etc.; less so in well-developed infants, who died from acute diseases.

Mr. T. HOLMES reports the case of a male child of five years, who suffered from extensive caries of the right calcaneus, superficial abscesses in various parts of the body, and numerous abscesses in the lungs. The pericardium contained a sero-purulent fluid; in the wall of the left ventricle was a sloughy cavity filled with decomposed blood, and opening into the pericardium below the auriculo-ventricular groove.

Dr. LEARED found, in a girl of 11 years, fatty degeneration of the heart.

Dr. TREADGILL reports the case of a negro child, of about 6 years of age, in whom the post-mortem examination revealed "a cartilaginous

development attached to the internal coat of the aorta near the heart for three-fourths of an inch, almost filling up the entire cavity of the aorta."

Several original observations on malformation of the heart, have induced Dr. PEACOCK to revise and extend a series of lectures, published some years ago in the *Medical Times and Gazette*. The subjects treated of in this essay embrace—1. Misplacements of the heart. 2. Deficiency of the pericardium. 3. Malformation dependent on arrest of development at an early period of foetal life (defects in the auricular and ventricular septa, contraction and obliteration of orifice of the pulmonary artery, supernumerary septa). 4. Malformations preventing the heart undergoing the changes which should ensue after birth (premature closure of the foetal passages, patency of the foramen ovale and ductus arteriosus Botalli). 5. Malformations which do not interfere with the functions of the heart, but which may lay the foundation of disease in after life (irregularities of the valves, etc.). 6. Malformations consisting in the irregular development of the primary vessels (transposition of aorta and pulmonary artery, descending aorta given off from the pulmonary artery, etc.). 7. Mode of formation, symptoms and effects, diagnosis, and medical management of malformations of the heart. The whole is a valuable contribution to the literature on malformations, particularly so from the original observations communicated. Besides, the author proves himself to be well acquainted with the preceding literature on the subject, quoting largely from English, American, French, and German books and journals. The latter are more deficient than the others; we miss particularly the monograph by Dr. Hermann Friedberg on the same subject. (*Die angeborenen Krankheiten des Herzens und der grossen Gefässe des Menschen, nebst Untersuchungen über den Blutumlauf des menschlichen Fœtus*. Von Dr. HERMANN FRIEDBERG. Leipsic, 1844, pp. 170.)

Dr. WILLIAMS describes the case of Mr. Groux, of Hamburgh, who is personally known to, and has been examined by a great number of our readers, as he has traveled all over the world to exhibit his congenital deficiency of the sternum.

The abnormality of persistent ductus arteriosus Botalli was observed by Dr. HEWITT in a child of three months of age. The heart was only about one-third of the size of a healthy heart from a child of the same age. Foramen ovale open; the ductus arteriosus perfectly pervious, having at its junction with the aorta a diameter of three millimetres.

Prof. BOCHDALEK, of Prague, describes a very extraordinary deviation of the pulmonary veins, found in a boy who died from peritonitis at the early age of four days. The child had always been cyanotic. No ductus venosus Arantii was found, as in some cases recorded by Soemmering and Otto; which proves that this canal is not absolutely necessary to foetal life, although there is, without it, no canal through which blood from the vena portarum may be led directly into the cava. Reports from literature, containing cases of Ramsbotham, G. Cooper, Hyrtl, Wilson, M. J. Weber, and E. F. Gurlt, are added to illustrate the new case of the author.

Dr. ARMITAGE records the case of a girl of  $7\frac{1}{2}$  years, who had suffer-

ed from palpitations from her earliest infancy, exhibited extensive dullness in the præcordial region, and a systolic bellows-sound, complained a few days before death of severe aching pain in the legs, principally knees and wrists, and died after an attack of convulsions. The aorta was ruptured at its bifurcation, rather more of the left iliac having yielded than of the right..

Dr. STEVENS publishes the case of an infant, born by easy labor and well developed, who had been well for the first two days, but died from copious dejections of blood through the anus. The whole body was anæmic, except the larger part of the ileum and all of the large intestine, which was found to be congested, of a dark red color, and covered with coagulated blood.

Dr. BEHR reports the case of a new-born infant, in whom the aponeurosis above the parietal bones and their pericranium was hyperæmic; on the right parietal bone there was a thick, coagulated extravasation,  $2\frac{1}{2}$  inches wide and 3 long; on the left another, somewhat thinner, along the margin of the bone. No extravasation was found on the basis cranii. No bones were hurt. The child was feeble and prematurely born. Dr. Behr then adds some remarks on the possibility or probability of severe injuries to the fœtus in utero from external causes. Such cases occur, rare though they be. Concussion of the uterus, detachment of the placenta, concussion of the fœtal cerebrum, rupture of vessels and organs combined with extravasation, are doubted by nobody. But some, like Prof. Casper, of Berlin, doubt the occurrence of fractures or impressions of the bones from external causes.

Dr. JACOBI publishes the case of a puny girl, who was affected with leucorrhœa on her second day, with hæmorrhage on the third, to such an amount, that two cubic centim. of blood were discharged in 24 hours. The mammae were slightly swelled, and yielded serous discharge similar to milk. Injections of aq. plumb. proved successful.

A large nævus, which occupied the entire left mammary region of a healthy infant, was observed at St. George's Hospital, London. It was about five inches long, transversely, and three and a half from above downwards, its greatest point of elevation being over half an inch. It was congenital, had not increased much in size, and was thick and rugose in surface. It was treated by passing a number of threads from above downwards, tying their ends so as to completely strangulate portions of it, which was, however, permanently done by passing long pins in its two directions, and winding a ligature around the whole.

Another child had a nævus similarly treated. It was the size of a crown-piece, and was situated on the calf of his left leg.

A case of a healthy boy of three weeks, related in the London *Lancet*, is remarkable for the large number of nævi found. A few of the marks had been noticed on the day of birth, but had increased in size, and many others came out since. They were found to number upwards of a hundred and fifty. The largest were about the size of sixpences. The treatment consisted in applying a little of the compound iodine ointment once or twice a day to the spots separately, and in the course of a few weeks this appeared to be exerting a very perceptible influence.

DRS. VALENTA and WALLMANN report a case of erectile tumor, angioma, which rose from the pia mater, and being enveloped by the dura mater, penetrated through a fissure between the frontal, ethmoid, and nasal bones. An erectile tumor of the pia mater, on the surface of the left hemisphere, has been described by Rokitansky (*Handbuch der Pathologischen Anatomie*, ii., p. 735); but in general such cases are very rare. Cases of encephalocele on the same place where our erectile tumor was found, have sometimes been reported. Dr. Wallmann relates a case of hydromeningocele in the same locality, which he found in an idiotic female of fifty years of age.

Dr. SHORE operated upon an erectile tumor on the nose, extending to a little above the superciliary ridge, below to within four lines of the end of the nose, and laterally quite to the inner angle of either eye, by passing a great number of hot needles rapidly through every portion of the tumor.

Mr. SPENCE exhibited a drawing of congenital nævus which had undergone a spontaneous cure. The lad had been suffering from gum-bile, which had given rise to abscess, and consolidation of the erectile tissue of the nævus had been the result. In other cases, Mr. Spence is in the habit of employing the perchloride of iron as an injection.

Dr. WALTON reports a case of subcutaneous nævus at the root of the nose in an infant eight months old, who was treated with iodine ointment and cold lotions without benefit. An aperture was made in the base of the tumour with a narrow tendon knife which was moved about with a view of breaking down some of the texture. A strong solution of tannic acid was then gently injected till the nævus was well distended. Six weeks after the operation there was no appearance of a tumor.

There is no risk of sloughing, an occurrence that is apt to ensue when the muriated tincture of iron is used, and when it is due to the free acid it contains.

Dr. QUINLAN removed a nævus from the cheek of a girl of nine months of age, by breaking up the tissue of the nævus by means of a cataract-needle in three different places, and injecting a solution of a drachm of tannic acid to an ounce of water.

Mr. WOOD operated on a nævus successfully by passing a worsted thread, dipped in iodine paint, superficially through the nævoid growth, by a blunt needle, in the direction of the lines of longitude on a globe map, through two punctures of opposite points, the thread being left in loops protruding at the punctures. A disk of flat wood, of the size of the part operated upon, having two projecting points opposite the punctures, was then placed upon the tumor, the loops slipped over the points, and the thread tightened. The effect was speedy, and obliteration complete.

Among the seven cases, in which Prof. Middeldorpf's galvano-caustic apparatus was resorted to, Dr. WERNER relates the case of a healthy girl of nine months of age, whose lower lip was increased to double size, on its right side, by a soft, compressible, not painful sanguineous tumor. It was operated upon by the galvano-caustic method, a copious loss of blood ensued but soon stopped. A scurf

formed, but was detached after ten or twelve days ; granulation was supported by external application of nitr. arg., but the tumor did not diminish in size. Finally the excision had to be performed by means of the knife.

Dr. NEUGEBAUER's pamphlet contains the literature and the author's extensive new investigations on the formation of the umbilical funis, and particularly on the relative position of its several constituent parts. The circumvolutions of the umbilical arteries and veins take a prominent part in these expositions, leading to entirely new results. One of them is this, that neither the umbilical arteries are circumvolved round the vein, nor sometimes the arteries round the vein, and again the vein round the arteries, as was supposed to be the case in some instances by Baudelocque, Velpeau, and Weidmann ; but that umbilical arteries and vein together, and without any change in their mutual situation, follow the spiral line characterizing the course of these vessels. Further, the pathological circumvolutions of the funis round the foetus, and the real knots in the course of the funis are made the subject of interesting examinations. The new results, and the real scientific gain obtained by this little book are so important, that we despair of doing the author justice and giving the reader a full view in the few lines allotted to us. The book is not only prominent by the common sense and clear reasoning of the author, but we have seldom had occasion to admire greater learning, and more special knowledge of the literature on any given subject, of all times, nations and languages.

Dr. LUCAS considers the decision on the strangulation of a newborn child by the umbilical funis to be very difficult. Some probability is given by an extraordinary length of the funis ; by its strength, a normal funis, according to Negrier's experiments, being sufficiently strong to suffocate a child ; by the presence of genuine knots recognizable by the intumorrhœa in the next neighborhood, and by the dilatation of the vein ; by a corresponding impression in the neck ; by central insertion of the funis, marginal or velamental insertion being more apt to effect death by bleeding.

Mr. NEWMAN relates a curious case of twins, in which the cord of one child was encircled by a knot on the cord of the other child. One child was alive and healthy, the other livid and dead.

Dr. JENKINS gives a tabular analysis of 178 cases of spontaneous umbilical hæmorrhage, showing the existence of two varieties of the form of umbilical hæmorrhage under discussion. First, and most common, that depending on a depraved condition of the blood, the spanæmia resulting sometimes from jaundice, through malformation, or deranged function of the liver, sometimes from an inherited scrofulous or syphilitic taint, and, probably, not unfrequently from privation and despondency in the mother during gestation, or during the same period an excessive use of alkalies or diluent fluids. Second. Independently of any dyscrasia of the blood, umbilical hæmorrhage seems to arise by reason of an unusual patency of the umbilical vessels, in otherwise apparently healthy children. As a predisposing cause of hæmorrhage, may act any influence which affects the normal plasticity or coagulability of the blood, as malfor-

mation of the liver resulting in jaundice, excessive drinking of diluent fluids, inherited taint, excessive use of alkalies during pregnancy, insufficient food, diseased condition of the umbilical vessels, arteritis, hereditary transmission of the hæmorrhagic predisposition, external violence to the navel, and, perhaps, the mother's imagination or emotions during pregnancy. Jaundice was present in more than twenty-three per cent. of the tabulated (178) cases, purpura, in some stage of the malady, in  $20\frac{1}{3}$  per cent. In more than 27 per cent. the bleeding took place from the walls, or at the insertion of the funis, before the completion of the physiological process of desiccation; in nearly 27 per cent., it occurred on the day of the separation of the funis; on an average in 102 cases, it commenced on the 8th day, viz., in the first week after birth in 56, during the second in 39, during the third week in 7. In one case, bleeding was apparent in  $3\frac{1}{2}$  hours after birth; in another, only at the termination of eight weeks. The average duration of the disease, in 82 fatal cases, was  $3\frac{1}{2}$  days; in one case, death ensued as early as 13 hours from the beginning of hæmorrhage, in one 38 days thereafter; the fatal issue may be attended by purpura, œdema, diarrhœa, muguet, or other signs of exhaustion. As to pathological anatomy, a great frequency of hepatic malformation or derangement, and an equal frequency of perviousness in some of the umbilical vessels, is prominent. Prognosis is fearfully grave, 149 out of 178 cases proving fatal. The treatment is more simple than successful. Neither styptics, nor cauteries, nor compression, are of any use; the ligature *en masse*, as recommended by Paul Dubois, being the only remedy. "Dr. Perry suggests that the use of the mineral acids during pregnancy, by women whose children have been affected with umbilical hæmorrhage, might be followed by favorable results."

Essays, articles, and literary notices on the question, whether the ligature of the umbilical funis, when omitted, must or can produce death, are very numerous indeed. There is no doubt that death by loss of blood from the funis has occurred, but it depends on a number of conditions. Among them PROF. FREDERICK counts the following: 1. The ligature of the funis may be too loose, completely omitted, or rendered impossible by the funis having been torn or cut into immediately in front of the navel-ring. 2. The umbilical vessels may remain open for too long a period. 3. Respiration may not have set in at all, or been interrupted. 4. A funis separated by a cut has more tendency to bleed than when torn. 5. Equable surface and structure, and absence of knots, gives more tendency than the reverse. 6. Detachment of the funis from the placenta is somewhat dangerous. 7. A greater disposition is given by an unfavorable position of the child. 8. By high temperature. 9. By tightly dressing. All these things may increase the possibility of loss of blood from the funis; but in every forensic case, the child must be proved to have been alive, when found dead by what appears to be loss of blood. Furthermore, a proof will always be necessary of the entire absence of any other cause of bleeding, as wounds of the vessels, precocious detachment of the placenta from the uterus, wound of the placenta, rupture of the funis before birth; in all these cases, there

are no symptoms of life ; or as rupture of the uterus, vicious sanguification from diseases of the mother, vicious development of the fœtus, etc. Moreover, it must not be overlooked, that a funis may bleed, although regularly tied, by the collapse of the tissue surrounding the vessels. No less the second twin may die from loss of blood, wherever there is but one placenta, and the funis of the first-born child has not been tied twice.

## V. ORGANS OF RESPIRATION.

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DR. BETZ considers snoring, in very young infants, to be produced by one or more of the following anatomical causes : Retropharyngeal abscess, inflammatory swelling of the epiglottis and fauces, struma, apnoea, dysphagia, convulsive symptoms, croup, laryngismus, angina, tubercles of the bronchial glands, and polypous excrescences. The direct cause, and the seat of snoring, is usually found in the velum palatinum or epiglottis. The author relates the case of a child some weeks old, in whom, at that age, the foetal condition of the lungs were overcome. The abnormalities found about the upper end of the respiratory organs, will be found to fully explain the obnoxious symptom of snoring. The hard palate was high and rounded, isthmus faucium narrow and round, velum palatinum nearly in contact with the tongue, uvula short and small. Pharynx was narrow, tonsils in close neighborhood to each other. Epiglottis can hardly be reached by the finger. Whenever the mouth was opened widely, the child did not snore. Nose appeared to be sunk, nasal cavities were narrow in their whole length ; and the upper lip thickened.

DR. VOLTOLINI, induced by observations of slow birth of the trunk, after the head had been born, expresses his opinion on the theories of the cause of respiration. Kind, and after him Valentin and M. Hall, considered the first respiratory movements of the infant to be produced by reflected action, the atmosphere coming in contact with the cutaneous surface, that is to say, with the peripheric ends of the spinal nerves and the trigeminus. This theory the author deems unable to explain respiration in cases of vagitus uterinus,

where atmosphere is coming in contact with but a very small part of the skin, but entering mouth, nostrils, and lungs. In his opinion, the excitation of the ends of the vagus nerve produces the reflected action of the respiratory muscles. Certainly it cannot be made an objection to this opinion, that even after both of the vagi are cut, the respiratory movements continue for a while ; it being a physiological fact, that the action of nerves serving vegetative life, when once instituted, does not cease suddenly. One fact cannot be doubted, viz., that in all cases of asphyxia of adults, or new-born infants, every irritation is and may effectively be employed to produce respiratory action. Thus more causes than one may exist at the beginning of respiration, but the normal one will always be the irritation of the vagus.

The observations of Prof. Ritgen, and others, show infants to be able to breathe, after the head is born, with circumflexed funis ; the complete circulation may be prevented, and death produced by a proportionate shortness of the funis before the rest of the body is born. DR. WILLIAMSON reports cases where the infants, while being born, respired freely, but afterwards one or more loops of the cord were found firmly encircling the throat. In some instances the disengaging of the coil of the cord was, owing to its extreme shortness, found impracticable ; for each succeeding contraction of the uterus was found to tighten and constrict the umbilical ligature more and more ; respiration ceased, and the face of the infant became black and congested. The author has found deep indentations around the neck of the child. In such a case, when left to itself, the infant would, after having respired, have been born dead, with an indented bluish groove encircling its neck. A post-mortem examination, in a case of alleged infanticide, would reveal all the indications usually regarded as conclusive proof, that the child had been born alive.

In cases of incomplete respiration in new-born children, MR. MORRIS resorts to mechanical means which he does not consider as new, but at all events highly recommendable ; effecting rhythmical motion of the thorax, by putting his thumbs on both sides along the vertebral column, and spreading his fingers like a fan all over the ribs.

DR. HEARD, of Galveston, Texas, thinks proper to report a very simple case of very simple *atelectasis pulmonum* in a new-born child. On the second day, he "felt satisfied that the lungs were at fault," and therefore he "determined to resort to artificial respiration." After six or seven respirations, he saw entire relief of all the distressing symptoms. Finally the author learns "from Dr. Stokes' work on the Chest, that there are some very sensible remarks by Dr. Joerg on this subject," meaning a book published twenty-four years ago on foetal lungs in the new-born child. We venture to say that a chapter on *atelectasis pulmonum* can be found in any manual on diseases of children, written in the last twenty years.

The same remark applies to DR. ASHENHEIM who publishes a very simple case of *atelectasis pulmonum*.

The new method which MR. SILVESTER brings before the profession, is effected by means of the same muscles as are employed by nature in respiration. In ordinary deep inspiration we lift the ribs and ster-

num by the pectoral and other muscles which pass between the chest and the shoulders, and thus produce the threatened vacuum which inflates the lungs. Silvester lifts the ribs and sternum by the pectoral and other muscles, which pass from the shoulders to the parietes of the thorax, by steadily extending the arms up by the side of the patient's head; by elevating the ribs the cavity of the chest is enlarged, a tendency to a vacuum is produced, and a rush of air immediately takes place into the lungs. Expiration is brought about by simple compression of the sides of the chest by the patient's arms.

The advantages of Silvester's method, as compared with that of Marshall Hall's, as stated by its author, are the following :

#### MARSHALL HALL'S METHOD :

Expiration is made to precede inspiration --the reverse of the natural order. In still-born infants forced expiration, at first (as they have never breathed), is, of course, impossible.

The warm bath cannot be employed during its adoption.

When the patient is turned to the face, and pressure made, the contents of the stomach are liable to pass into the œsophagus and trachea.

In the supinated position, the tongue is apt to obstruct inspiration by falling back into the throat.

Both sides of the chest are not equally inflated.

The amount of air respired is exceedingly small, the *actual* capacity of the lungs not being enlarged; as proved by experiments.

#### SILVESTER'S METHOD :

Inspiration may be made to precede expiration, or *vice versa*, at the will of the operator.

May be adopted when the patient is in the warm bath.

Contents of stomach not liable to pass into trachea.

Tongue effectually prevented from obstructing inspiration.

Both sides of the chest are equally inflated.

A larger amount of air is inspired than by any other method; as proved by experiment.

Dr. BEHREND publishes some cases of his own, and three others described by Drs. PEACOCK, BENNETT, and BIRKETT, in *Lond. Med. Times*, Jan., of chronic hoarseness in children. Some of these cases lasted for months, even for years. This hoarseness is an affection similar in its symptoms as in its treatment to the Clergymen's sore throat, but the cause seems to be over-exertion and cold combined.

Dr. WILKS reports the case of a lad of twelve years of age, who died in the course of a typhoid fever, from general emphysema produced by a sloughing ulcer in the larynx. At the back part of this organ, at the junction of the vocal cords, was a hollow space the size of a large pea. On the left side, a probe passed through this cavity into a space between the trachea and œsophagus; in this was some purulent mucus, proving the communication which had existed during life. The air had thus penetrated into the posterior mediastinum, and thus by the thoracic walls to other parts of the body.

Dr. HAUNER reports an extraordinary frequency of diseases of the respiratory organs in spite of a beautiful weather, especially in October, 1857. The majority of cases were those of a febrile catarrh of the bronchia, with a very troublesome nightly cough, lasting for several days, and ending with copious expectoration. Hooping cough

was most effectually removed by belladonna, small doses of morphia, laurel water, and at a late period of the disease, chin. and lich. island.

In a very elaborate and careful essay, DR. ZIEMSEN comes to the following results on pneumonia in children: Mortality from pneumonia of the infantile age, exhibits larger fluctuations than in adults. Pneumonia in children and in adults, need not always coincide as to the number of cases and mortality. Infantile pneumonia is sometimes epidemic, without particular influence on adults; and pneumonia may be frequent in adults, without affecting children very much. In Hamburgh, in 1841, the mortality amongst children, from pneumonia, amounted to 22 per cent. more than the average, whereas, in the same year, the mortality amongst adults, from the same disease, was 17 per cent. below the average. The fluctuations in the mortality from pneumonia in adults, exhibit some parallelism in different localities of the same climate, but the fluctuations of infantile pneumonia do not correspond at all. Copenhagen and Hamburgh are cities of nearly the same climate, site, and social standing, but the excessive rate of mortality from infantile pneumonia at Copenhagen in the years 1844 and 1847, does not find its equal at Hamburgh, and again, the fearful epidemics of infantile pneumonia in Hamburgh, of the years 1841 and 1843, are absolutely isolated. Thus, the occurrence of infantile pneumonia in territorial limits can hardly be accounted for by modifications of known atmospheric influences, but has to be considered from a similar view to that of contagious diseases, measles, scarlatina, etc., in general.

DR. GUILLOT publishes the treatment of pneumonia in nurslings, as practiced in the hospital "Necker" at Paris. No general or local blood-letting is resorted to, except from six to eight cups in very robust children. Emetics of ipec. and tart. em. are freely administered, sometimes dry cupping is resorted to. Vesicatories are objected to. Excessive thirst is soothed by breast-milk or sugar-water. During convalescence, the thorax is covered with adhesive plaster until the cough has completely disappeared. We fully agree with DR. VOGEL, that the worst complication of pneumonia in nurslings is diarrhœa, which is often increased by ipecac; tartar emetic, in the dose of  $\frac{1}{8}$  grain, which is administered by Guillot, is, perhaps, not injurious, but certainly of no use. Besides, we would say that it is not a good practice to allow breast-milk for removing thirst, because food ought to be diminished in acute febrile diseases, and not increased, as would be done by giving the regular food, where not hunger, but thirst only, is present. And a large amount of sugar-water is also objectionable, because of the sugar having a great tendency to produce diarrhœa. Water will not only be found sufficient, but certainly be found best.

PROF. HIRSCH recommends the oxysulphuret of antimony in catarrhal affections, where the inflammatory stage has passed by, or has never been present. He administers this remedy as soon as the least mucus or serous secretion is perceived, as well as in pneumonia, after the inflammatory orgasm has subsided.

DR. MASCHKA, among a number of other forensic cases, reports that



of a woman charged with willfully suffocating her child. The child was proved to have died from pneumonia of both lungs.

DR. HEWITT says, that the emphysema of the lungs most undoubtedly plays a very important part in most of the diseases of the respiratory organs in children, that it adds much to their fatal tendency; that it has probably no small influence in hastening the fatal event in some diseases in which its existence is hardly suspected, and that many adults who are supposed to have been entirely cured of the respiratory diseases of their infancy and childhood, are not seldom suffering severely from the emphysema contracted at that early period of life. No part of the lung-surface is free from the liability to be affected with emphysema, yet it is rare to meet with it in its primary and simplest form at the extreme borders of the lobes; these latter parts being, in children, the particular seat for apneumatosi. Emphysema is not often confined to one lobe. Apneumatosi is never unaccompanied by emphysema; and if large portions of the surface of the lobe present the one lesion, it is the rule that adjacent portions of the tissue are affected with the other. Solidification of the lung tissue, due to the presence of tubercle or true pulmonary inflammation, appears also, though in a less degree and less constantly, to entail with it an emphysematous change in the vesicles of neighboring lobules. The individual air-cells are not much enlarged in size; the average measure of normal air-cells is about  $\frac{1}{10}$ th of an inch in diameter; emphysematous ones of  $\frac{1}{20}$ th or  $\frac{1}{10}$ th inch in diameter are very rare occurrences. Emphysema is produced as a secondary consequence by whatever reduces the bulk of the lung at any one point. Atelectasis is a frequent cause of emphysema; so are bronchitic affections, particularly in the first two years; the reason why emphysema produced by atelectasis is slight in degree is, that the shape and size of the thorax is, in the newly born infant, from the first regulated by the degree of expansion of the lung tissue. The first effect of bronchitis or catarrh in an infant is obstruction to the entry of the air; this obstruction increasing, certain portions of the lung become apneumatic, the adjoining healthy lobules taking a compensating action, but by so doing, themselves become diseased—emphysematous. This acute form most commonly attacks the upper lobes of the lungs; most extensively so below the clavicles. Whenever it is present to a considerable degree, the “expiratory” type of respiration is intensified, the respirations are eminently shallow in character, the cough is short, stifled, and weak; and coincidently with these, the physical signs of emphysema at the apices, and of collapse at the lower portions of the lungs may be satisfactorily made out. Chronic emphysema produces a great liability to frequent attacks of bronchitis; the rapidity with which severe dyspnoea supervenes on an apparently slight attack of bronchitis is, in ordinary cases, a good test of the presence of emphysema. Its physical signs are well known, and there are no new particulars in Dr. H.’s remarks.

Dr. ARAN operated upon a case of empyema, in a girl of twelve years of age, which was situated on the diaphragm and the right lateral surface of the pericardium. This singular situation was the reason

of some peculiar symptoms before the performance of thoracocentesis, the tumor pulsating isochronously with the pulse of the heart, and expanding during expiration, decreasing during inspiration.

Dr. ROE describes a circumscribed empyema occupying the left mammary region of a child of nine years of age. A trocar and canula were introduced, and ten ounces of puriform fluid drawn off. Mr. MOORE relates the case of a double empyema, with malposition of the heart and sternum.

Prof. HIRSCH reports the case of a girl of ten years of age, who, after having been affected with severe attacks of inflammatory rheumatism, suffered from a large number of pyæmic abscesses, and was finally submitted to thoracocentesis. She fully recovered, but after some years was observed gradually to sink from pulmonary tuberculosis.

Mr. DIX reports the following pathological curiosity which occurred in a child of eight months. A common needle, three inches in length, and broken through the eye, entered the right side of the chest between the cartilages of the 8th and 9th ribs, passing below the free edge of the lung without wounding it. At this part it penetrated the convexity of the diaphragm and traversed the upper portion of the right lobe of the liver, and again finding its way into the chest, it transfixed the lower lobe of the lung, and its point was at last arrested by the spinal column. There had been no bleeding whatever, but the lung was completely collapsed and compressed by the escape of air into the pleural cavity.

Mr. BALLARD attended a child aged five months and a half, who had been suffering from symptoms of croup, and died rather suddenly. In the anterior mediastinum there was a mass of tuberculous glands, and an abscess the size of a pigeon's egg, containing softened tuberculous matter, which communicated with the trachea through its anterior wall, by a ragged opening half an inch in length, the mucous membrane around and above for some distance being much ulcerated. The larynx and the tracheal mucous membrane below it, for the space of more than an inch, appeared quite healthy. The pharynx contained a good deal of purulent fluid, such as was found in the cavity of the abscess. Both lungs were entirely studded with masses of tubercles; the pleuræ of the right side being adherent. The right side of the heart was distended with dark, semi-coagulated blood.

Prof. HIRSCH makes some remarks on paralytic laryngostenosis produced by swelled or tuberculous lymphatic glands compressing the nerves of the vocal cords. The attacks of suffocation will return many times, and always last longer than in inflammatory or spasmodic affections; but the patients, are, as it were, used to it, and do not suffer from it. In some cases the treatment with iodine and cod-liver oil proved successful. Of a like nature, as to the disease in question, are the remarks of Dr. PLAGGE.

The same author directs attention to the difference between spasm of the glottis and laryngitis stridula, which he pronounces to be a catarrh of the glottis with spasm and œdema. Therefore, its attacks last longer, sometimes a day or more, than those of spasm of the glottis, but are not so frequent; although children are met

with, from time to time, suffering repeatedly from this affection. Children, who are said to have suffered from croup ten times or more, will almost always be found to have been affected with laryngitis stridula.

Dr. HARTSHORNE believes to have seen an enlargement of the thymus gland, proving fatal in a child five months old ; it had always appeared to be healthy and well developed, and presented no symptoms of disease to attract attention up to the moment of death. It was suckled by its mother at two o'clock of the morning of its decease, when it went to sleep as usual. At about seven A. M. it was found dead, lying on its back, with blood about the nostrils, and the jugular veins distended. Examination of the body displayed no peculiarity, except the morbid alteration of the gland, and the results of its pressure upon other parts. The heart was forced down close upon the diaphragm. The vena cava descendens contained an unusual quantity of blood. The thymus was very much enlarged, and below the proper gland, but connected with it, and inclosed in a continuous enveloping membrane, was a mass whose appearance and consistence resembled those of fatty structure, and which, when shrunk under the influence of alcohol, had three inches in perpendicular length, two inches in width transversely, and seven-eighths of an inch in antero-posterior thickness.

In order to enable our readers to judge themselves of the value of Dr. FRIEDLEBEN's book, we give in the following some aphorisms containing the principle results obtained by the author :

1. The thymus is a gland without any excretory duct ; it consists of an aggregate of closed follicles.

2. Its blood-vessels are of moderate size ; thus their amount of blood is also moderate.

3. The nerves contained in its substance belong to its blood-vessels.

4. It exhibits a secretion, consisting of a transparent, clear, intercellular liquid, and numerous round nuclei intermixed with some cells.

5. The nuclei are transferred, unaltered, into the venous circulation.

6. The follicles of the thymus are subject to an unremitting decomposition and reconstruction ; the so-called concentric corpuscles described in the microscopic anatomy of the thymus, are follicles undergoing their morphotic decomposition.

7. The thymus is growing in size, without interruption, from its first embryonic formation up to the years of puberty ; but its relative growth, after birth, is less than the average development of the rest of the body ; the more so, the greater the age.

8. After the years of puberty have been reached, the thymus either remains stationary in its growth, or undergoes a gradual diminution of its volume ; the diminution of size is rapidly increasing in adult age.

9. In old age the thymus is rarely met with ; wherever it is found it consists of an adipose intercellular tissue, preserving the shape of the thymus.

10. Years advancing, the secretion of the thymus decreases.

11. The normal diminution of the thymus consists in a process of fatty degeneration, taking its origin from the wasting of its vasomotor nerves. Thus obsolescence of its arteries and dilatation and varicosity of its veins are effected. Metamorphosis becomes slow, and the morphotic elements of its secretion are decomposed or undergo fatty degeneration; only the action of the lymphatic vessels remain intact, and enables resorption of the tissue to go on.

12. The thymus may be wanting in the foetus and in infants of normal development.

13. The chemical elements of the thymus are water, albumen, gluten, sugar, lactic acid, pigmentous matter, fat and salts, and perhaps hypoxanthin besides. Ammonia, leucin, acetic acid, and succinic acids do not take part in the formation of the thymus.

14. In early age, albumen, sugar, salts are prevalent; in later years, gluten, lactic acid, and fat.

15. The salts principally are phosphates of earths in young individuals, of alkaline nature in older ones.

16. The general nutrition of the individual determines the volume of the thymus and the amount and nature of its secretion; the scarcer food and the more prevalent hydrates of carbon, in proportion to azotic substances, the less the secretion of the thymus or the more prevalent the percentage of fat and water.

17. Want of nourishment and diseases going along with troubles of digestion and assimilation produce a collapse of the tissue of the thymus. The secretion formed is rapidly resorbed and the chemical composition is soon altered.

18. The pathological disturbance having been removed, the thymus again takes its former functions, increases in size and continues its growth; only when the interruption lasted for a long time, the tissue may be collapsed and resorbed to such an extent as to produce perpetual partial obliteration.

19. The nerves of the thymus do not suffer from the atrophy of the organ brought about by general diseases; thus this atrophy is, in its histological and physiological nature, essentially different from the process of normal involution.

20. The thymus exhibits, while in its physiological condition, a slight turgescence during assimilation, depending on secretion being more copious; there is no turgescence in the thymus depending on the circulation of the blood being stopped.

21. The size of the thymus is subject to numerous individual changes in every age.

22. Metamorphosis of matter in the thymus is like that of the other organs.

23. The growth of the spleen is increasing, in advanced years, in the proportion of the diminution of the size of the thymus.

24. The thymus is more active during digestion and assimilation, the spleen in the intervals.

25. The thymus is found in all classes of the vertebrates and obeys the same laws in its growth. It will decrease quickest in the animals whose growth is the most rapid.

26. Its histological and chemical nature differs entirely from the fat-gland of the winter-sleepers.

27. Diseases of the respiratory organs do not affect the volume and secretion of the thymus, except by injuring digestion and assimilation.

28. The thymus exhibits abundance of growth wherever general growth becomes extravagant. After this period of extravagance of growth has passed by, the thymus is somewhat inactive ; thus its action is always in proportion to the general metamorphosis.

29. The thymus may be extirpated without injuring the well-being of the animal.

30. Animals deprived of their thymus take a larger quantity of aliments than before the extirpation ; there is no tendency in such animals to devour heterogeneous substances.

31. The growth of the body is larger in animals, whose thymus is extirpated, than in normal ones ; but it is less than ought to be expected from the immense amount of food swallowed.

32. Extirpation of the thymus has no particular effect on the volume of the liver. In the normal animals, during the first two months of life, the growth of the liver is proportionately smaller than that of the body in general ; afterwards, for a short period, larger, and then again smaller. The like is observed in animals whose thymus has been extirpated.

33. Extirpation of the thymus has a manifest effect on the spleen ; the growth of which is less in proportion to the body in general, after the operation has been performed. The growth of the spleen in animals operated upon is, in the first weeks of life, larger by 5 per cent. than in animals whose thymus is untouched. But as early as after the eighth week, the growth of the spleen in animals operated upon is less, by 26 per cent. than in normal development.

34. Sanguification in animals whose thymus is extirpated, is accelerated ; their blood contains more albumen and water ; the number of the uncolored blood-cells is greater, of the colored ones less ; secretion of albuminates increased, of carbonic acid diminished ; excretion of water greater by means of perspiration, less by secretion of urine.

35. The growth and chemical constitution of bones is influenced by the extirpation of the thymus. This influence depends on the state of osseous development at the period of the performance of extirpation.

36. Such being the main results of a series of physiological researches, it may be taken as a fact, that the *thymus is an organ furthering, during the period of growth, nutrition and sanguification, and the formation and development of tissues.*

37. Diseases of the thymus gland are proportionately rare occurrences. Hyperæmia and apoplexy have been met with in new-born infants, who had died from the use of violent means during the parturition, and have been found also in somewhat older infants. Also tuberculosis has been occasionally observed in the thymus. But occurrences of this kind are by no means so frequent as former authors have believed them to be.

38. The majority of cases considered hitherto to be diseases of the

thymus, either did not occur in the thymus at all, or have wrongly been taken as such ; the thymus being not at all diseased.

39. There are no characteristic symptoms belonging to diseases of the thymus: Only one case of suppuration of the thymus has been made public ; no peculiar symptoms could be distinguished during life.

40. A great number of cases of alleged hypertrophy of the thymus have been reported ; nevertheless, real hypertrophy is a very rare occurrence. The majority of cases of so-called hypertrophy are over-rated, the physiological size and weight of the thymus not being sufficiently known.

41. Undoubtedly not one case is hitherto known of hypertrophy of the thymus producing pathological symptoms dependent on its excessive volume.

42. Neither in its normal, nor in its hypertrophied condition, is the thymus able ever to become an obstacle to respiration and circulation, or to exert a pressure on the respiratory nerves, or to injure cerebral circulation and the innervation of the muscles of the glottis, or to produce a periodical turgescence in its substance by stoppage of the circulation. Thus the thymus is unable as well in its normal as in its hypertrophied condition, to produce laryngismus stridulus. *There is no asthma thymicum.* Thus, the name of thymic asthma is but of a historical interest ; it was founded on erroneous ideas on the nature of the disease, on erroneous interpretation of anatomical results, and on insufficient knowledge of the physiological nature of the thymus gland.

All the preceding theses on this subject have been proved by extensive anatomical and physiological researches, and an ingenious sifting of the ancient and modern literature on the subject. We are not surprised when the author says that this work took him a decennium. It is not only one of the most important recent books in the whole bulk of medical literature, but as a contribution to infantile pathology, we rank it foremost among all the monographs that have appeared for a long time past. It belongs to the class of books which, although the author may never again touch a pen, makes him an authority at once, and leaves his name to the history of medical science.

DR. HAUNER, when refuting some theses published by Dr. Luszensky, gives the following aphorisms, embracing the contents of a work soon to appear : 1. Genuine (laryngeal) croup is a disease peculiar to infantile age ; its cause is to be looked for in the organization (stage of development) of the infantile larynx. 2. Anatomy and physiology will probably elucidate its nature. 3. There is no proof that croup is produced by a peculiar crasis (abnormal plasticity) of the blood. 4. Genuine croup always commences in the larynx, and many times migrates downwards, but in no case upwards. 5. A Pseudo-membrane, large or small, is a characteristic of croup. 6. Diphtheritic croup differs much from laryngeal croup, and usually is the consequence of, or connected with, a peculiar crasis of the blood, which is known also in other organs. 7. Thus diphtheritic croup is almost always secondary, and is essentially not very much different

from croup following acute exanthems. 8. Diphtheritic croup usually commences in the fauces, on the uvula, tonsils, etc., migrating downwards; very seldom it commences in the larynx and trachea. 9. The symptoms of a violent laryngeal catarrh are very similar to those of genuine or diphtheritic croup; but there is never a false membrane in catarrh. 10. Such cases are very often considered to be, and are described as croup. 11. There is no specific remedy against genuine croup; therapeutics have to undergo modifications according to the individual case. 12. In the average of cases, emetics, cold, mercury, blood-letting, will do good. 13. In certain cases of laryngeal and tracheal croup, the operation is indicated. 14. Diphtheritic croup requires cauterization, emetica, alkalies, tonics; in no case calomel, bloodletting, vesicatories, or purgatives. 15. In diphtheritic croup, tracheotomy is seldom indicated, particularly because of the rapid spreading of the diphtheritic process. 16. If it has been made, cauterization has to follow it. 17. The most violent laryngeal catarrh does well with an appropriate regimen and antiphlogistic treatment. The proof of this is the great number of so-called cases of croup which are reported to be cured.

The article of Dr. Luszinsky's, Dr. Hauner refers to, has been published in *Journ. f. Kinderk.* 1857, 9, 10, and some extracts of it may be found in *N. Y. Jour. of Med.* March, 1858.

According to Dr. LUSZINSKY, there are four indications in croup, which are—1. To alter the peculiar crisis of the blood. This indication requires antiplastics; of which hepar sulphuris, sulphate of copper, and tartar emetic are either too uncertain, or too dangerous, because repeated vomiting would be injurious by congestion of the brain, and mercury, which readily injures by producing diarrhœa, salivation, and general mercurialism. Better than all of them, are alkalies, which Luszinsky seems to have recommended prior to Lemaire and Marechal, of Paris. The hydrate of potash or soda is most antiplastic, but they are not easily tolerated; the bicarbonate is the most digestible, but the abundance of carbonic acid in the chemical composition of the bicarbonate of potash or soda diminishes the medicinal effects of the alkalies; therefore, he gives the carbonate of potash or soda, from one half of a drachm to two drachms every day. 2. To prevent the localization of the inflammation in the larynx. This indication requires no bleeding nor leeches, but, in the first stages of the disease, cold applied to the larynx, and large blistering plasters, kept in suppuration for some days. 3. To remove the spasm of the larynx by narcotics. 4. To destroy, or remove the pseudo-membranes, which have been formed. The best caustic in these cases is a solution of from four to eight grains of nitrate of silver in an ounce of water, which is to be applied by a brush. Emetics are necessary where pseudo-membranes are loose, or beginning to loosen in the larynx or bronchi.

These and similar remarks Dr. LUSZINSKY repeats, while replying to Dr. Hauner's article.

The case of croup reported by Dr. COXE, in which a thoroughly antiphlogistic method of treatment was resorted to, is somewhat doubtful as to the correctness of diagnosis.

Dr. WASSON advocates, in croup, the administration of large doses of calomel, and the introduction into the larynx and trachea of a solution of nitrate of silver, of the strength of 30 or 60 grains to the ounce of water.

Catheterism of the larynx is, in France, performed by Dr. LOISEAU. A successful case of his is communicated by Trousseau, who says, that he remembers from his own practice only three cases of genuine croup getting well without tracheotomy, and that, without this operation, the chance of recovery has been that of 1 to 100. The first cauterization was performed by a solution of nitrate of silver, the second by a saturated solution of tannic acid, which Dr. Loiseau thinks to be greatly preferable. Alum and tannic acid, powdered, were blown besides into the pharynx and the nasal cavities.

E. BARTHEZ has come, by experiments, to the conclusion, that the local application of a solution of chlorate of soda is more effective in macerating pseudo-membranes than chlorate of potash. He therefore ordered instillations into the trachea of chlorate of soda gr. j. to iv., and water gr. xxx., after tracheotomy had been performed and the pseudo-membranes were known to spread through trachea and bronchi, and had them repeated every quarter of an hour. Before he made these applications, almost every child died after tracheotomy, because the pseudo-membranes could not be removed from below the canula. Afterwards but very few died. After each instillation, a severe cough used to set in, which always brought up a part of the solution, and some macerated pieces of pseudo-membranes. When he instilled water instead of his solution, the same cough ensued, but nothing but the water was thrown out. It is remarkable indeed, that these results obtained in the same epidemic, in which by far the greater number of patients died after the operation without succeeding instillations. Therefore, the remarks of Dr. SEE, in the session of March 24th, of the Société Médicale des Hôpitaux, are not to the point, when he reminds Dr. Barthez of the fact, that the mortality changes with the year and the genius epidemicus.

Dr. MAYER feels bound to recommend glycerine as a local application to the rima glottidis, from whence it is expected to glide down into the larynx. Dr. SHETTON reports to have applied, in a few severe cases, with a favorable and even unexpected result, an ointment of extr. bellad. and ungt. hydr., either to the sound skin over the trachea, or to a blistered surface.

Dr. KORTUM considers tartar emetic as the very best remedy in croup, but gives it in another way than it is usually prescribed. He prescribes for a child of one year of age, from  $\frac{1}{16}$  to  $\frac{1}{8}$  grain every two hours; for older ones, comparatively larger doses, thinking the alterative effect on the blood most important, and nothing less desirable than the mere emetic effect in the shortest time possible. The author seems to be almost positive about the favorable result, but considers new attacks imminent, as long as the purgative effect of the medicament has not also showed itself.

Dr. PUDON publishes some cases of croup where the local application of cold water, according to Priessnitz's rules, and emetics of sulphate of copper, were sufficient to cure even severe and obstinate attacks.



Dr. Missoux, too, takes pain to eulogize, for the hundredth time, the sulphate of copper as an emetic.

In the Harveian Society, Dr. FULLER referred to a case, in which there was a large scrofulous tumor in the trachea, accompanied with a croupal sound during expiration, in contradistinction to the inspiratory sibillation of genuine croup; when meeting with the same symptoms in another case, he therefore gave his opinion against the operation. The child died, but this time the case proved to be one of genuine croup.

Mr. THOMPSON exhibited in the Pathological Society of London, the specimen, and reported the case of a villous growth from the vocal chords in a girl of eight years, causing sudden death by suffocation, after occasional attacks of impeded respiration had preceded for two years. A warty growth occupied the situation of the superior and inferior vocal chord of each side and the intervening ventricle, a very narrow, almost imperceptible interval existing between the opposing growths, before the larynx was opened. It consisted of very minute villi thickly coated with pavement epithelium.

Dr. A. VOGT reports, and illustrates by drawings, a case of diphtheritic inflammation of the tonsils and all the respiratory tubes, particularly interesting for the rapid reproduction of false membranes, and for their extension downwards, as far as into the bronchi of the 4th and 5th class.

Prof. BOUCHUT says, that the last period of croup is accompanied with general anæsthesia of the skin. This anæsthesia will increase in proportion to the accumulation of the fibrinous secretions in the trachea, and is produced by the impediment to the free entrance of air into the lungs. Thus anæsthesia shows the difficulty in respiration to have proceeded to such a dangerous light, as to positively require the immediate performance of tracheotomy.

Dr. ROCHESTER arrives at the conclusion, that tracheotomy, from its intrinsic gravity, is never to be lightly or indiscriminately undertaken; that it affords a possibility of recovery, when hope from other resources cannot reasonably be entertained; and that moment having arrived, it should not be neglected or delayed.

Dr. PASSAVANT objects to Prof. Pitha's (*Prag. Viert.*, 1857-1), proceeding in performing tracheotomy, to the separate use of instruments for making the incision, and for dilatation, and to the canula being a simple one. In the latter point we think Dr. P. is perfectly right, although Dr. GUNTNER asserts that a double canula hurts the mucous membrane of the trachea and leaves too little room to the ingress of air. Dr. G. further expresses the opinion, that a lateral aperture in the canula will always moderate the stream of ingressing air; and considers the experience of Prof. Schuh, who almost always saw pneumonia follow on tracheotomy, to be not at all general. In six cases Dr. G. has seen no pneumonia, except where it was present before the operation was performed.

Like the average of European writers, Dr. SAUER is in favor of the performance of tracheotomy. He is by no means of the opinion, which has been expressed sometimes to show, that even the diagnosis of croup is difficult and uncertain. Guersant, to have a sure di-

agnosis, thinks the presence of pseudo-membranes absolutely necessary. Trousseau gives the following physiological explanation: If the cough sounds croupy in the whole course of the disease, there is no narrowing, except of the glottis; but if the cough, after having been croupy in the commencement, goes on becoming weaker and soundless, there is certainly an appendix present, not vibrating and usually consisting of a plastic exudation. The number of erroneous diagnoses is very small; among 54 cases of Bretonneau's, and 22 of Cook's, there was no mistake proved by the post-mortem examinations; in 193 cases given by Dr. Sauer, in 21 only, no membranes were found. The rate of mortality is exceedingly high, between 80 and 90 per cent. Medication has proved to be very unsafe, nor semicaustic applications to be of much use; the operation alone is successful. Although Trousseau has himself deserted his former principle of performing the operation as soon as possible, our author urges the fact, that strength will fail rapidly, and the normal constitution of the blood undergo dissolution by procrastination. Not to operate at all, even in olden times, Casserio, and Laureteo Heister, reprimanded as unscientific, cowardly, and unchristian.

Dr. SAXER thinks but to operate near the larynx, where blood vessels are rare and small. Trousseau used no ligature in 127 cases; Baum, 9 in one. Many of the patients died after the operation, of bronchitis, pneumonia, and pulmonary emphysema; in which small abstractions of blood are not contraindicated. Where swallowing is impeded, the tube ought to be used. The author's other remarks correspond with the usual opinions and orders of all good surgeons and writers. As to the mode of performing the operation, he recommends a slow and cautious proceeding. His cases are six, of whom three proved successful. Two girls of  $2\frac{1}{2}$  and 4 years, and a boy of 3 years, died; 3 boys of  $3\frac{1}{4}$ , 4, and 7 years, recovered.

Tracheotomy, according to Dr. PETIT, is an absolute necessity in the asphyctic stage of croup. Whenever the disease has progressed to its last stage, it is highly injurious to rely on the merely mechanical effect of emetics; at all events, every case in this progressed stage will perish without the operation being performed. The presence of pseudo-membranes in the larger or smaller bronchial tubes, and complication of croup with bilateral pneumonia have always been considered as contraindications to the performance of tracheotomy. As to the former, the exact diagnosis is impossible in the majority of cases. Undoubtedly the pseudo-membranes are usually found in larynx and trachea; wherever they fill up the small bronchia, the operation could not be performed, because of death ensuing by rapid suffocation; where only a part is obstructed, it is available at all events to procure as much air as possible. Besides, instillations of warm water, and alkaline solutions, may be employed to dissolve the exudations. As to the complication with bilateral or simple pneumonia, there are, wherever it is present, two causes leading to suffocation; either of which it can but be highly advantageous to remove. Dr. Petit expresses the hope, that in future times, through the opening in the trachea, some mechanical help may be found in bronchitis, tuberculosis, etc. We do not doubt that Dr. Petit will be highly pleased and

surprised by our countryman's (Horace Green's) successes obtained by injections of nitrate of silver.

Dr. A. VOGT, after publishing a case of croup in a girl of seven years, which ended fatally a fortnight after the operation of tracheotomy was performed, examines all the prejudices still prevailing against this operation, in Switzerland. Especially, he treats of the fact, that wounds of the trachea are by no means fatal, but heal readily; and examines the amount of danger resulting from arterial, venous, or parenchymatous bleeding. While not underrating these dangers, he completely denies any danger arising from the entrance of air into the veins, or from emphysema of the cellular tissue. The cause of consecutive affections of the lungs, he finds less in the low temperature of the entering air, than in deficient moisture, in deficient expectoration of tracheal mucus, in consequence of the morbid absence of the epithelial covering, and in the possibility of foreign bodies coming into contact with the pulmonary tissue.

Prof. GUERSANT has added to the number of his instruments, and describes a tenaculum, an œsophagian forceps, and a caoutchouc probe, destined to serve as a conductor to the silver canula. The rest of his essay is dedicated to some practical remarks, of which the following advice is perhaps deserving of particular notice: To remove false membranes from the vocal cords and epiglottis, a small pledget of lint is tied with a double string, one of the ends of which is firmly fixed to an india-rubber catheter, which is carried upwards into the larynx. This apparatus raises the glottis, and, through the pharynx, appears in the fauces; it can thus readily be passed several times up and down through the larynx, so as to remove the false membranes adhering to the parietes.

We commend Dr. MARTIN's excellent essay on tracheotomy to those, who, after all the efforts made to introduce this operation into more general practice, and after all the brilliant successes obtained in the most dangerous cases, still hesitate to adopt it in their own practice. The author gives an accurate review of its utility and its dangers, neither overrating the one, nor concealing the others. The proofs of what he wants to prove are numerous enough in literature, which he is thoroughly acquainted with.

Dr. CREQUY's dissertation shows a full knowledge of his subject. Some of his notices are of particular interest, as, for instance, the fact, that of his 30 cases there are twelve in which no false membrane could be seen in the fauces, while it is well known that in a great number of cases of croup, in France, it descends from the fauces downwards; and his confirming the old experience that in some fatal cases of croup there is apparently no cause to be found in the small size and extension of the membranes; and finally, his experiments, made after the example of Barthez, on the dissolving influence of some saline solutions on the substance of false membranes. Chlorate of soda macerates a false membrane more rapidly than either chlorate of potassa or nitrate of potassa; bicarbonate of soda effecting maceration even slower than any of them. Of all the children on whom the operation of tracheotomy was performed, not one under three years of age recovered. In one, a severe hemorrhage persisted,

even after the introduction of the canula, and could not be stopped even by perchloride of iron. The child died some hours after the operation had been performed.

Tracheotomy was performed in the case of a female infant of seven months, for the removal of a foreign body. The operation was unsuccessful, the infant dying with the symptoms of pulmonary oedema, perhaps "because the foreign body, a crumb of bread, had been detected in one of the bronchi." There is no report of a post-mortem examination.

Dr. ELLIS reports a case of croup, in which tracheotomy was performed, in a boy of 15 months of age. Patient died next day. No post-mortem examination was made. Dr. LYMAN operated on a child, 3 years and 4 months old; patient died 30 hours after the operation was performed, from rapid membranous exudation at the bifurcation. Dr. WYMAN opened the trachea once with a penknife, and inserted a quill; the child died 24 hours after. Dr. CABOT has operated twice, without success. Dr. BUCKINGHAM operated successfully on a girl of 3 years and 11 months, and removed the canula on the 27th day.

Mr. SPENCE reports five cases of tracheotomy in croup, to which we feel obliged to direct the attention of the profession, because of this operation being too little thought of in this country and in England; whereas, on the Continent of Europe, it is performed on an extensive scale, and with no small success. Mr. Spence's cases occurred in children of  $4\frac{1}{2}$ ,  $3\frac{1}{2}$ , 4, 5, and  $2\frac{1}{2}$  years of age, the first, fourth, and fifth of whom recovered, the second and third died. In none of them was there any great amount of bronchial affection, and in none of them did the croupous exudation seem to have taken place to any great extent on the tracheal mucous surface, although the tenderness over the trachea prior to the operation, and the appearance of the lining membrane, as seen on opening the tube, proved that it was to some extent implicated. The author remarks, that bronchitis, or broncho-pneumonia, almost invariably occurs after tracheotomy is performed, and is one of the great objections to the operation in cases of croup, the inflammation being brought on by the operation itself, and the necessary presence of the tube.

These circumstances do not seem to explain sufficiently the broncho-pneumonia frequently following tracheotomy, since Prof. Schuh, of Vienna, in the *Wiener Medicinische Wochenschrift*, 1857, published his able article on this subject. According to him the main reason is, penetration of the air to the air-cells of the lungs by too short and immediate a way. This assertion is made probable by the fact, that all the cases of broncho-pneumonia above mentioned occurred in the right lung, and by the other fact, that the right bronchus is by far the widest.

A case of successfully performed tracheotomy is related by Mr. BIRD.

Another case, in which the operation was performed for chronic laryngitis, and proved successful, is reported by Dr. CABOT.

Dr. BRIBOSIA communicated recently, to the Academy of Medicine at Brussels, some observations on tracheotomy, which are of the highest interest, and elucidate the favorable influence of this operation.

Mr. MARTYN detailed, in the Western Medical and Surgical Society, the particulars of a case of croup occurring in a child of  $3\frac{1}{2}$  years, who was able to endure the doctor's injudicious treatment for three weeks, before it gave way and died.

Dr. SALZER relates two cases of tracheotomy performed for croup. The first occurred in a boy of  $3\frac{1}{2}$  years. No pneumonia followed, and the canula was removed on the seventh day. The second case was that of a boy of 5 years, who was entirely asphyctic, and suffered from pneumonia also. He died after 34 hours.

Dr. FULLER published, in the *Medico-Chirurgical Transactions*, vol. lx., 1857, seven cases of tracheotomy, performed for croup, three of which terminated successfully. He then enumerated 23 operations of tracheotomy performed in England, including his own, nine of which were successful. Since the appearance of Dr. Fuller's paper, five additional cases have been published, of which three had a favorable result. There is no doubt, then, that this operation is productive of a great saving of life. But the author is opposed to its early performance, as recommended by the French surgeons, and disapproves of its performance where the patient has been out of health prior to his attack of croup; if his illness has been preceded by pneumonia or severe bronchitis; if he is suffering from any exanthematic or other disorder; and finally, lays particular stress on the fact, that the operation itself barely admits air and does not remove the disease, which is to be treated as before the operation.

Mr. BROWNING relates the case of a boy of two years and ten months of age, who had been suffering from a barking cough, with hoarseness, for five months before croup became manifest and required the operation of tracheotomy. The canula could be removed after five days, large quantities of false membranes having been eliminated through it.

Dr. KLETT reports the case of croup in a pale, anæmic, and already cyanotic girl of six years, in which tracheotomy proved successful.

Dr. MILLARD's dissertation is of high statistical and pathological value, beside the accurate records of 55 observations; of particular interest are the systematic tables containing the statements on the operations which have been performed. In 1857, tracheotomy has been performed, in the "Hôpital des Enfants Malades," 70 times; in the first half of 1858, 54 times.

1857.				1858.			
Males.....39	Recovered....	4		Males.....23	Recovered....	4	
Females....31	"	....12		Females....31	"	.... 9	
<hr/>				<hr/>			
70		16		54		13	

Thus the proportion of recoveries is most favorable in girls, but sometimes the reverse has taken place; as in 1854, when of 23 boys on whom tracheotomy was performed, 11, and of 6 girls not one recovered. Therefore, the sex seems to have no influence on the success of the operation.

Of the 62 girls who were subjected to the operation in the eighteen months of 1857 and 1858, there were of

2 years, 7, of which number died, 7, recovered, 0							
3	"	19	"	"	14	"	5
4	"	10	"	"	6	"	4
5	"	11	"	"	6	"	5
6	"	7	"	"	4	"	3
7	"	4	"	"	3	"	1
8	"	2	"	"	0	"	2
9	"	1	"	"	0	"	1
11	"	1	"	"	1	"	0
<hr/>				<hr/>		<hr/>	
62				41		21	

In 1850 and 1851, out of 8 cases of tracheotomy performed on patients of 6 years and over, 7 recovered. In 1852, out of 16 cases, at the same age, 8 were successful; in 1856, 5 out of 9; of the other 4, one, of 8 years, died on the operating table; one died of a severe attack of measles, supervening on the thirteenth day after the operation; the 2 last ones died, no particulars being given, but a few hours after the operation.

Of 62 boys operated upon during the eighteen months of 1857 and 1858, 30 were under 4 years of age. Not one recovered, as is shown by the particulars of the following statement:

2 years old were 13, of whom died, 13, recovered, 0							
3	"	17	"	17	"	0	
4	"	9	"	7	"	2	
5	"	9	"	6	"	3	
6	"	4	"	2	"	2	
7	"	4	"	4	"	0	
8	"	3	"	2	"	1	
9	"	2	"	2	"	0	
11	"	1	"	1	"	0	
<hr/>				<hr/>		<hr/>	
62				54		8	

The chances are the less favorable the younger the patients. In early age the operation is more difficult and dangerous, the trachea being narrow, and the region in which the instruments are to operate limited; immediate accidents are more to be feared; the results are more uncertain, because of the difficulty of alimentation, indocility of the patients, and want of vital resistance; and the chances from eruptive fevers, or convulsive attacks are more doubtful. Eruptive fevers are particularly dangerous when complicated with croup; nevertheless, beside the two cases of croup complicated with measles, recovering after tracheotomy, described by Guersant some years ago, a third case of the same class is reported, which ended successfully.

As to the time when the operation is to be performed, the author proves, by his statements, that the sooner the asphyctic condition is

removed, the more favorable are the chances of recovery ; but there are no chances at all wherever symptoms of a general poisoning of the blood have appeared. Of 19 patients who recovered, 3 had been sick before the operation was performed for 2 days, 5 for 3, 5 for 4, 3 for 5, 3 for 6 or more days.

Of complications of croup, there are four of principal interest : general diphtheritis, inflammatory diseases of the respiratory organs, convulsions, which are, fortunately, rare, and troubles of the digestive organs. Fifty respirations or more in a minute are an unfavorable symptom after tracheotomy has been performed, and require the utmost care and attention to the state of the respiratory organs.

Of the 70 operations performed in 1857, there were in

January.....	3, of whom recovered, 1	
February.....	4	" 3
March.....	5	" 0
April.....	7	" 2
May.....	3	" 0
June.....	6	" 2
July.....	4	" 0
August.....	6	" 2
September.....	5	" 1
October.....	6	" 1
November.....	5	" 1
December.....	16	" 3
	—	—
	70	16

Of 63 operations performed in the first 7 months of 1858, there were in

January.....	10, of whom recovered, 2	
February.....	6	" 1
March.....	15	" 7
April.....	11	" 3
May.....	7	" 0
June.....	5	" 0
July.....	9	" 7
	—	—
	63	20

Of the 9 operated upon in July, 4 were boys, of whom recovered 3, and 5 girls with four recoveries.

As to the medication preceding tracheotomy, the first indication is not to injure. As injurious, the author considers leeches, vesicatories, mercurial frictions (which Trousseau declares to be as dangerous as blood-letting), purgatives, and emetics of tartar emetic or sulphate of copper (for their purgative effect); he considers as well calomel, as bicarbonate of soda, to be of little use. Emetics of ipecacuanha are, in his opinion, of some use, but only by their vomitive effect ; chlorate of potassa is always given, because, when producing salivation, it is thought to favor the expulsion of false membranes. On cauterization of the larynx, our author does not

pronounce his opinion, as it would not affect the consequences of tracheotomy but by hindering alimentation by the superficial wounds of the pharynx. He attributes no value whatever to the efforts made to the purpose of defibrinating the blood, as by alkaline remedies, and is of the general persuasion, that the chances of success are the more favorable the less energetic medication has been.

In the 22 cases of recovery, after the performance of tracheotomy, the canula was removed—

On the 3rd day in.....	1
“ 4th “ .....	5
“ 5th “ .....	3
“ 6th “ .....	3
“ 7th “ .....	1
“ 11th “ .....	2
“ 12th “ .....	2
“ 13th “ .....	2
“ 14th “ .....	1
“ 17th “ .....	1
“ 29th “ .....	1
	—
	22

And the wound was perfectly cicatrized—

On the 14th day in.....	1
“ 19th “ .....	3
“ 20th “ .....	1
“ 21st “ .....	1
“ 25th “ .....	1
“ 27th “ .....	1
“ 28th “ .....	1
“ 29th “ .....	2
“ 31st “ .....	2
“ 32nd “ .....	2
“ 36th “ .....	1
“ 37th “ .....	1
“ 38th “ .....	1
“ 40th “ .....	1
“ 42nd “ .....	1
“ 46th “ .....	1
“ 51st “ .....	1
	—
	22

The remaining part of Dr. Millard's book, the perusal of which we cannot but highly recommend, contains a minute description of the operation with all the particulars; and further remarks on the alimentation and medication after the performance of the operation and local and general complications and their cure.



Prof. BOUCHUT has invented a tube through which the child is wanted to breathe as long as the exudations of the larynx are not removed. This hollow tube is to be put into the cavity of the larynx, and has some peculiar shape so as to adhere to the vocal cords. Prof. B. asserts that they are brought in with the greatest ease, not at all preventing the motions of the epiglottis; that they are well tolerated by the larynx; that they afford the possibility of removing asphyxia in croup without resorting to tracheotomy; that false membranes find their way easily through the tube; and that this new invention will prove highly useful in small places, where there is no proper assistance, etc., for performing tracheotomy.

Reference is taken to the experience of Dr. Horace Green, of New York, showing that probes may be introduced into the larynx, and that they are well tolerated by this organ. Sestier reports ten cases of introduction of a canula into the larynx, with good success. Among the few cases in which Prof. B. has employed his "tubage," is that of a girl of  $5\frac{1}{2}$  years, suffering from croup, which had proceeded as far as to the stage of asphyxia and anæsthesia. The tube was introduced and the croup got well; but the child died from pneumonia. The results of the post-mortem examination were the following: In the auditory canal, in the nostrils, and on a sore place on the arm, there were false membranes. There were some also left on the pharynx and on the posterior surface of the arytenoid cartilages. No more false membranes were left in the larynx and trachea; the mucous membrane was thickened, rugous, granulated, and pale in the trachea, red in the region of the vocal cords. The mucous membrane was neither softened nor ulcerous. The vocal cords were not injured, somewhat thickened by swelling of the mucous membrane, and the ventricles of the larynx appeared to be less deep. No diphtheritic exudation was found. The bronchi were intensively red, the mucous membrane granulated, not softened, but covered with a purulent exudation. The right lung was slightly adhering to the costal pleura. Several pulmonary lobes were hepatisated, crude tubercles were numerous in the lungs, and several bronchial glands were tuberculous. A boy of  $3\frac{1}{2}$  years of age, suffering from croup and laboring under several attacks of suffocation to such a degree as to be almost asphyctic, had the tube in his larynx for 40 hours, and expectorated through it some thick cylindrical membranes. When a new severe attack of suffocation occurred, Prof. Bouchut's assistants performed tracheotomy. The child recovered, but few false membranes were brought up afterwards. The Professor's opinion is, that the child would have come over this attack just as well as over the preceding, and that his assistants had no reason to perform the operation, instead of further confiding in the sufficient effect of "tubage." He further says, that the tube was introduced very easily; that no attack of suffocation occurred after its introduction; that the functions of the epiglottis were by no means hindered, and the child was speaking with a loud, clear voice; and that a tube of a diameter of eight millim., and a length of from two to three centimetres, is able to allow of the passage of enormous false membranes, from trachea and bifurcation.

This new method has made a great stir at Paris. They have discussed it in their journals, societies, and academies; they have ordered and made and read reports; questions of priority have been raised, for certainly Prof. Bouchut would not like to tell that anybody before himself had ever introduced an instrument into the larynx.

DRS. REYBAR, of Lyons, LOISEAU, of Montmartre, BRIOIS, of Paris, declare to have been the first to catheterize the larynx; even the name of that American, Horace Green, is mentioned. Dr. Loiseau has a sealed note of his opened, deposited by him in the archives of the Academy of Paris as early as in the year 1851, in which a tube is described through which medicaments may be introduced into the larynx. By means of a double-valve tube and a small forceps, he declared to be able to extract false membranes; in no case he left the tube within the larynx. A pretty voluminous probe was used by him, in diseases of the larynx, already in the year 1840. The "tubage" of the larynx, for the mere purpose of effecting a free passage for air, would seem to be indicated only in œdema of the larynx and in functional troubles of the epiglottis. Tracheotomy, however, could not be rendered superfluous by it. To tear off false membranes from the larynx, perhaps a brush-formed instrument, like the "écouvillon" recommended by Dr. ENGUY, would be deemed sufficient.

DR. LATOUR, in his report on the meeting of the Academy of Medicine at Paris, on the 2nd of Nov., says that the "tubage" cures no more and no better than tracheotomy, nor does it prevent the propagation of false membranes into the trachea, nor even the operation of tracheotomy itself which it was deemed necessary to perform in one of the reported cases. Undoubtedly the "tubage" is not an easy operation, and *probably has not been performed at all*, as it is hardly conceivable how the children would have been able to speak with a tube in their larynx. D. LOISEAU employs injections only, made by means of catheterism of the larynx, of solutions of tannic acid; Dr. BAUCHET prefers alum, and both like Dr. COSTILHES, who thinks proper to attribute the death of a girl of 2 years suffering from diphtheritic angina and croup extending as far down as into the bronchi, to some internal swelling due to the employed nitrate of silver, are opposed to the nitrate of silver. We venture to remark, that the former gentlemen may have good reason for their opinion and its expression, but we think that the "medical society of the Seine department" would do better not to allow their members to render themselves so utterly ridiculous, as Dr. Costilhes is permitted to do in the society's report. He once presumes, that a case of diphtheria with false membranes from the pharynx to the bronchi would not have perished without the use of nitrate of silver, and presuming, talking and printing is one and the same thing. We are sorry to state, that such has been unfortunately the case with our brethren at Paris; if it was not, Prof. Bouchut would never have taken it into his mind to ruin the public opinion on his physiological learning and his common sense and his veracity, in the course of a few weeks. Unless the French character was so very versatile, the word taken in its favorable and unfavorable meaning, we could not but consider

Dr. Bouchut's case as fully hopeless, The following is, according to a report given by MR. CREQUY, one of his cases, and modern modes of treatment: A strong boy of 10 years suffered from diphtheritic exudation, in the fauces and larynx; there were laryngo-tracheal rhonchi, roughness of voice, and cough. Cauterization had no favorable effect; therefore "tubage" was resorted to—with no better success. Because there was no success visible, Dr. Bouchut took pneumonia to be the reason of it and made a venesection. When the child became no better, he performed tracheotomy—and the boy recovered, but not without having, for a time, suffered from anasarca and pleuritic exudation consequent on Dr. B's. most injudicious treatment. No more, than in treatment, is Dr. B. successful when making up his mind to deal in statistics. He asserts, that the number (*not percentage*) of deaths from croup has been steadily increasing since 1826. In the first years after this period one death from croup occurred among a population of 3000—6000 inhabitants, because tracheotomy was performed in but few cases. Afterwards, when more operations were performed, one death from croup occurred in from 1400—3000 inhabitants. He states that the increase in the number (*not percentage*) of deaths from croup dates from the time of Bretonneau's book on diphtherite, and Trousseau's lectures, and the introduction of cauterization, caustic instillation, and tracheotomy into practice, and that *these facts are the causes of the large number of deaths from croup*. B. says so,

"and B. is an honorable man."

In his opinion, as he emphatically states, the large number of, deaths from croup is not produced by a greater frequency or severity, of the disease, but by hemorrhage, diphtherite of the artificial wound, and secondary pneumonia, which are the effects of premature operations as performed by Trousseau and others. These have to come up for the difference between the former and the present number of deaths from croup.

PROF. TROUSSEAU has completely refuted him. His statistics he shows to be ridiculous, and his "tubage" dangerous, because of consecutive necrosis of the larynx, useless when the croupous process descends into the trachea; and he disbelieves we think justly, that it has been made at all. Finally he shows that Dr. Bouchut is far from right in asserting that it is dangerous, and bad practice to perform tracheotomy early, proving by statistics, that among 69 operations on moribund patients there were recoveries to the amount of 21 per cent., while 64 per cent. recovered of 39 patients who were operated upon in an early stage of the disease.

As to the size of the canula, the same author is of the opinion, that a larger size is always preferable to one that is too small, the former being, sometimes, able on its own account to suppress hemorrhages.

As to after-treatment Prof. Trousseau expresses the opinion, that a good operation with careless after-treatment will prove unsuccessful in every case, whereas an unskillful operation with a good after-

treatment will save one third of the patients. The utmost care ought to be taken of the patients. They require a nourishing diet; difficulty in swallowing is sometimes removed by closing the canula for a moment. In diphtheritic croup no vesicatory ought to be applied. The air entering the trachea must be warm and damp. The canula must produce no pressure on the neighbourhood of the wound. The canula will usually be removed on the sixth or ninth day, sometimes on the fourth, sometimes not before months or years have elapsed.

DR. DEMARQUAY shows that patients suffering from croup, are anæsthetic in the last, asphyctic stage of the disease.

In DR. BOHN's opinion Croup may be either descending, or ascending; severe cases will generally migrate through the whole length of the respiratory organs, and sometimes, like acute exanthems, jump suddenly over to remote parts. Croup is either idiopathic, or diphtheritic (progressing from the pharynx into the larynx), or catarrhal (developed on the basis of, and out of a simple laryngeal catarrh). To this variety those cases of croup belong which are observed in the premonitory stage of measles. The croupous process in the larynx and trachea is seldom fatal by itself, death being the consequence of croupous bronchitis. All the symptoms in the entire course of the disease are fully explained by the inflammation, the presence of false membranes, and the paralysis of the glottis.

MR. MATTHIEU exhibited before the Paris Academy of Medicine, a new instrument, which is very much like a *lithotome caché*, and by which he claims to perform the incision of the trachea in a safer and quicker manner than by any one else.

PROF. LANGENBECK has invented a double hook, which is destined to fix the trachea and to show the exact place, where the incision is to be made between the two halves. By removing the two halves from each other the instrument is, at once, a dilatatory for the easier introduction of the canula. From practical experience we dare say that it is a useful instrument; in some cases the sharp hooks might, perhaps, be somewhat longer and and less bent.

DR. NEUDÖRFER describes a double canula, of which the outer half can be removed as well as the inner half. We do not perceive that such an apparatus is needed at all.

## VI. ORGANS OF THE NERVOUS SYSTEM.

1. Atlee, W. F., *a Monster of the Genus Peracephalus*.—Amer. Jour. April.
2. Förster, *Contributions to Pathological Anatomy and Histology*.
3. Hunt, J. A., *Letter to the Editors Peninsular Journal*.—Penins. Jour. March.
4. Jackson, *on a very rare Form of Monstrosity ; Two Heads one on the Head of the Other*.—Bost. Med. Jour. March.
5. Pitha, *Report on the Occurrences in the Chirurgical Clinique at Prague*.—Prag. Viert. 1.
6. *Minutes of the Obstetrical Society of Edinburgh*.—Ed. Jour. March.
7. Gibb, *Double Sub-pericranial Cephalhæmatoma*.—Trans. Path. Soc. Lond. IX. p. 380. Lancet. Jan.
8. Brünnicke, *on the Pathology of Cephalhæmatoma*.—Journ. f. Kinderk. 5, 6.
9. Bierbaum, *Cephalhæmatoma Verum*.—Preuss. Ver.-Zeit. 38.
10. Friedrich, *on Cretinism*.—Bl. f. gerichtl. Anthropol. 5.
11. Klose, C. W., *Idiotism in Silesia, a Sketch from Forensic Medicine*.—Henke's Zeitsch. 1.
12. Paasch, *Commotio Cerebri and Wound of the Cranial Bones*.—Journ. f. Kinderkr. 3, 4.
13. Jacobi, A., *on Irregular Development of the Infantile Cranium, and the Etiological and Prognostic Importance of the Premature Closure of the Fontanelles*.—N. Y. Jour. of Med. Jan.
14. Huschke, E., *Ueber Craniosclerosis Totalis Rachitica und Verdickte Schädel überhaupt, nebst neuen Beobachtungen jener Krankheit*. pp. 54. (*On Total Rachitical Craniosclerosis and Thickened Skulls in General, with New Observations of that Disease*.)
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20. Pace, J. M., *Cerebro-Spinal Meningitis*.—New Orleans Med. and Surg. Jour. May.
21. Wythes, J. H., *Apoplexy, with Sudden Death in Children*.—North Am. Med. Chir. Rev. Jan.
22. Murray, J. J., *Remarks on Two Cases of Poisoning by Opium in Young Children*.—Ed. Jour. Feb.—N. Y. Jour. of Med. May.
23. Lodge, R. T., *on a Case of Poisoning an Infant by Syrup of Poppies*.—Lancet. Sept.

24. *Meeting of the Medical Society at Vienna.*—Zeitsch. d. Ges. d. Aerzte zu Wien. 50.
25. Chambers, *The Value of Mercury in Acute Hydrocephalus.*—Lancet. June.
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27. Lawrence, *Puncture of the Head in Hydrocephalus.*—Med. Times and Gaz. Jan. 2.
28. Phillips, R., *on the Treatment of Infantile Hydrocephalus by Elastic Pressure.*—Lancet. Jan.
29. Heyfelder, J. F., *Punctio Hydrocephali.*—D. Klin. 46.
30. Wilks and Bryant, *Chronic Hydrocephalus in Four Stages; Death.*—Lancet. Dec.
31. Bristowe, *Cancerous Growths Connected with the Membranes of the Brain, and Producing Hydrocephalus.*
32. Davis, W. L., *an Hydrocephalic Relic.*—Sav. Jour. Med. July.
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34. Ayres, H. B., *a Case of Congenital Hydrocerebral Hernia.*—North Am. Med. Chir. Rev. Jan.
35. Valenta, A., and Wallmann, H., *Hydromeningocele above the Root of the Nose of a New-born Infant.*—Zeitsch. d. Ges. d. Aerzte z. Wien. 25, 26.
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41. *Fall of Child from a Third-Story Window.*—Lancet. Sept.
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50. Robin, F. L. F., *Du Spina Bifida*. Thèse. Paris. (*On Spina Bifida*.)
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69. Von Dem Busch, *Convulsions in an Infant, Treated with Chloroform*.—Journ. f. Kinderk. 3, 4.
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75. Cothenet, E., *Du Diagnostic des Paraplégies*. Thèse. Paris. pp. 29. (*On the Diagnostics of Paraplegia*.)
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DR. ATLEE, gives the following account of a monster of the genus peracephalus: "The monster has no head or upper extremities. The trunk and lower extremities are of a size corresponding with those of a well formed fœtus of seven months. A want of perfect symmetry, however is very manifest in the two halves of the trunk, which is remarkable for a number of elevations, with depressions between them. These elevations are due to the accumulation of a great quantity of cellular tissue. This sort of lumpy condition exists likewise in the lower limbs, which present, in addition, several other imperfections. The feet are turned inwards, and they possess but four toes, two of which, the smallest, on one foot, are not separated. The external organs of generation are those of the female; the anus exists. Upon the front of the trunk, between the umbilicus and its upper extremity, is something having the appearance of a small empty bag or bladder, attached by a rather narrow pedicle. Both above and below this bag is a small tuft of hair. Towards the sides of the thorax, in the place usually occupied by the nipples, are small round orifices."

PROF. FORSTER publishes a case of absence of both eyes in a newborn child. There were no anterior lobi, no optic, nor olfactory nerves, but a cyst between the dropsical third ventricle and the pituitary gland. There is no doubt that this anomaly has been the consequence of a dropsy of the anterior end of the medullary tube during the earliest period of fœtal life.

DR. HUNT publishes the case of a monstrous child, the anatomical description of which is, verbally, the following: "The child's head and face were about a medium between a human and a frog. Its eyes, neck, breast, shoulders, and arms, were exactly like those of a frog."

No less incomplete is the description of a monster, by PROF. JACKSON. The child weighed nine pounds, and lived for a month. There was a second very small head, with some cranial bones, but, probably, without cerebrum, on the head of the normal.

PROF. PITHA observed the case of a boy of twelve years, who suffered, in consequence of a fall, from a fissure of the upper portion of the frontal bone, in which hair was impacted. The hair being removed from the fissure after twenty-five days, a perfect cure was ac-



complished. Another case of a foreign body penetrating into the structure of the cranium occurred in a boy of four years of age. The foreign body was extracted without trepanation, and the cure was perfect in a fortnight.

DR. KEILLER reports the case of a new-born infant, having a large tumor on the left parietal bone, of the size of an egg. A hard rim of bone could be felt all around at the base of the tumor. No treatment was ever had recourse to, nor required.

A cephalhæmatoma on each side of the top of the head came under the observation of DR. GIBB. The child had been born after a labor of a quarter of an hour, without assistance of any kind. The swelling on the left side was the largest, and fully the size of a hen's egg. It did not communicate with the other one, and pressure produced no effect on the child, who was in every respect healthy. The tumors were found to be encircled apparently by an osseous ridge, which seemed elevated with the tumor, as it were, lying in a sort of depression in the bone. The first was completely absorbed in thirty-nine days, and the second in fifty days.

In a child of twenty-four hours, who had been born easily, and without artificial means, DR. BIERBAUM observed a cephalhæmatoma of two inches in length, and one and one-half in breadth, on the superior and posterior part of the right parietal bone. It was soft, encircled by an osseous margin, the skin not discolored. Warm aromatic fomentations were of no use, embrocations of mercurial ointment and iodide of potassium proved successful. Another cephalhæmatoma came under Dr. Bierbaum's care in a boy of eight and one-half years of age; it was situated on the inferior and anterior part of the left parietal bone, was the size of half a hen's egg, soft, elastic, fluctuating, surrounded by prominent osseous margins; skin not discolored. Nothing could be found to explain the tumor, which became larger with the use of warm fomentations, and, when incised, exhibited a large quantity of black liquid blood, and healed rapidly.

PROF. FRIEDREICH has published an article, written in his clear and simple manner, on the forensic and anthropologic relations of cretinism, omitting expositions on its bodily and psychical ones. We therefore, are satisfied to merely announce it.

DR. KLOSE publishes some statistical reports on the frequency of idiotism in the plains of Silesia, in which an undulated soil, abundance of water, and a peculiar condition of the atmosphere are reported to exist. These, and a particular individual disposition, Dr. Klose counts among the causes of idiotism, which may be developed with feverish symptoms, especially in older children of from two to three years, but is by no means of an inflammatory character. Malaria influences seem to be prominent. The brain of such juvenile idiots is mostly small and hard, the cranium smaller than usual. Deafness and dumbness is a very common occurrence. A fatty fibrinous infiltration takes place between the neurilemma and the cerebral tubuli; a degeneration, not only impeding the transmission of impressions on the nerves, but also injuring the nutrition of the medullary and cortical substances. Its injurious influence on the mental faculties of the organism is, therefore, easily understood.

PROF. HUSCHKE, the great measurer and weigher of crania and brains,\* died, while this last work was being printed; and never was a man more fortunate to leave after him a work, that would of itself procure to its author immortality in the annals of pathological anatomy. Every sentence of this book being valuable, we regret not being able to give more than a meagre report of its manifold contents. But whatever we may select is worthy of the highest interest. The new case of total osteosclerosis described by our author, is that of a girl of seventeen years of age, whose skull (the normal weight being 600 grammes), weighed as much as 4,117 grammes. The microscope showed, that the medullar (Havers') canaliculi were large, and very numerous on the surface, narrow and very few in the interior of the sclerotic bones, and that the osseous canaliculi were more spheric and irregular in site and shape. The chemical composition was also abnormal, the constituents being phosphate of lime, 65.59; carbonate of lime, 11.12; sulphate of magnesia, 1.14; cartilage, very little fat, etc., 22.15. No fluorate of lime was found. After all, the bones taken as a whole, proved exceedingly solid, but fragile, when tried in small pieces, very white in their interior, but yellowish on their surface; the latter color being the relic of extravasated blood or other pigmentous matter. Another skull, in the possession of the author, and apparently only in the beginning of sclerotic development, weighed, inferior maxilla excluded, 1,075 grammes; and a third, in the museum of the University of Jena, of the same description, is that of a young baboon, in which all the bones covering the hemispheres had undergone the sclerotic anomaly.

The superior half of the skeleton, in the physiological state, exceeds the inferior half by a greater amount of calcaria. But this prevalence is not only absolute, but also relative, the single bones containing a larger average proportion of earths in general, and lime in particular. There is also a physiological craniosclerosis in families as well as nations; the thickest and hardest skulls being found in African negroes, whose crania, although they be not absolutely heavier than Caucasian ones, undoubtedly have a greater weight in relation to the size of the cranial cavity. Further, the crania of the flesh-eating negroes of Guinea are much harder and heavier than those of Persians and Hindoos. Moreover, it is altogether noteworthy, that the human organism in Africa is throughout prominent for the exceedingly strong development of the substances and organs taking the lowest place in human chemistry and physiology, viz.: bone, fat, and sexual organs, etc. Of undoubted morbid total craniosclerosis, there are only ten cases; those of Malpighi, 1697; Cuvier, 1822; Ribalt, 1828; G. Forster and Bojanus, 1826; Ilg, 1822; Kilian, 1822; Otto, 1822; Vrolik, 1848; Albers, 1851; Huschke, 1858. The disease does not affect the auditory bones, the condyles of maxillar and occipital bones, and the styloid process of the tem-

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\* This great work, published at Jena, in 1854, bears the title: "Cranium, cerebrum and mind, of men and animals, described according to age, sex and race, from new methods and investigations." It contains nearly two hundred pages, in fol., and is confessedly the results of more than ten years' hard labor.

poral bone. There are some symptoms of the disease in the posterior part of the cranium and basis cranii, but most affected are the bones of the face and the frontal, parietal and cribroid bones. Thus the disease takes its origin in the anterior portion of the skull, particularly in the superior maxilla, and proceeds upwards and backwards, terminating in the basis cranii, in the neighborhood of infundibulum and appendices. Two observers have been so fortunate as to meet with the preceding disease in the living. The average amount of earthy matter is very considerable in all of them. While the normal proportion of earthy matter to organic substance in cranial bones has been found by Professor Frerichs to be  $= 2.1$  (or  $1.5$ ) :  $1$ —it is in the sclerotic bones from  $3.5$  to  $4.4$  :  $1$ . Generally the carbonate of lime is reported to have been found increased, which proved to be the like in spongy bones. All the cases were those of juvenile individuals, or at least the disease had commenced in childhood.

The extension of the disease over the greater part of the cranium, contrary to the nature of local exostosis, proves the abnormal process to be the result of vicious general development. Professor Huschke, in opposition to the rest of the authors, pronounces the nature of the disease rachitic. The first origin must be traced back to early infancy, perhaps to foetal life. Very probably the bones in early infancy were soft, succulent, and full of blood-vessels, and the cranium and cerebrum like the rest. After the period of rachitic, spongy thickening, and consequent mollification, osteoporosis was followed by the stage of rachitic eburneation, which continued to go on by the support of chronic inflammation. Now, in the first period of rachitis the bone is soft and spongy ; its layers, while not less in number, secede from each other. The osseous substance is darker and more copious, the medullar cells larger, etc. ; but in the period of sclerotic eburneation the peculiar osseous cells become denser, more numerous, the canaliculi thinner, medullar canals and diploë are gradually obliterating. The vegetation of the inner lamina of the bones is said to stop, in the physiological state, after the tenth year of life ; and the dura mater does not form new layers before ; the regressive period of cerebral development takes its commencement in advanced years. After the fiftieth or sixtieth year of life, resorption commences to lose power, the cerebrum becomes smaller, the veins narrower, arteries wider. If this development commences in earlier life, the above-named disease, is originating, which, when the hyperostosis of the cranium is external ; that is to say, when but the external surface is affected, does not affect the cerebral functions, but gives rise to serious trouble of the mental faculties when internal, and produces spasmodic affections, neuralgias, and paralysis.

The conditions necessary to the development of crano-hyperostosis are first, abundance of lime ; secondly, congestion, and sometimes chronic inflammation. It is a characteristic fact that the bones, the development of which is the quickest after birth, show the greatest disposition to hyperostosis, as the maxillar and cranial bones. Abundance of lime may be produced by such food as meat. One of the patients is reported to have been a very hearty eater. Or, as has been the case in Huschke's individual, there is little excretion of lime by

the urine. Or there is a metastasis of lime in such a way, that lime is resorbed in certain other places, and introduced into the substance of the cranium. Probably a number of causes coöperate to the same effect. But, at all events, it must be borne in mind, that the pathological process, great though the anomaly may be, is in a majority of cases to be explained by, and to be considered as, an extravagance in normal physiological development. The expositions of this fact, as published by Huschke, supported by his genius, extraordinary learning, and knowledge of literature; and further, the remarks on ossification of the sutures made on the last pages of this excellent work, we have the satisfaction to state, fully corroborate the views held by us long ago, and laid before the profession in a short essay on the premature closure of the fontanels and sutures, and their pathological importance (*N. Y. Jour. of Med.*, Jan., 1858); a subject on which we have, in this very volume (Part I., Art. vii.), submitted some new and interesting facts and observations to the critical examination of our readers.

Dr. OTTERBOURG directs the attention of medical men again to the usefulness of cold affusions to the head in cerebral diseases.

The patient referred to by Dr. BUDD, was a girl of ten years of age, with the symptoms characteristic of meningitis, viz.: headache, restlessness, jactation, sleeplessness, vomiting, a drawn-in belly, and confined bowels. There was no strabismus. The patient recovered after venæsection had been made twice.

Such cases occur but seldom, as the majority of such cases in children, are cases of scrofulous, and dyscrasic inflammation in general.

Dr. LESUEUR publishes, in the *Annales médicales De la Flandre occidentale*, five cases of meningitis tuberculosa, of which three were cured by the method of Dr. Hahn, as described in his book *De la méningite tuberculeuse étudiée au point de vue clinique, par Henri Hahn*, Paris, 1853. Dr. Hahn's method is known to our readers to consist principally of embrocations of tartar emetic salve on the scalp. Although the five cases may not have been tuberculous meningitis, they were, at all events, severe cases of meningitis, and the favorable result is very remarkable indeed.

In the association of German naturalists and physicians of last year, Dr. FRIEDLEBEN endeavored to show that simple meningitis must be discerned from the tubercular form of the disease, and sometimes could be met with, and cured too, in individuals affected with general tuberculosis. In Dr. Friedleben's opinion, the diagnosis of tubercular meningitis requires the presence of a protracted stage of prodromi, hereditary influences, and dyscrasic symptoms; in post-mortem examinations, the bronchial glands are generally found to be tubercular. Acute hydrocephalus and tubercular meningitis are by no means synonymous; for in the second half-year of life, where essential changes take place in the organs of sanguification, hydrocephalus without tubercles, also cerebral hyperæmia with lethal result are not unfrequent occurrences. In all these forms of disease the prominent symptoms must be removed, and the strength spared; cold affusions have proved successful in convulsions. Cerebral tu-

bercles, especially miliary tuberculosis of the arachnoid membrane, are by no means absolutely lethal. Dr. KÖHLER reports a case of meningitis terminating successfully in a tuberculous child, and recommends, in convulsions, preparations of opium. Iodine is warmly recommended by others. Dr. KUCHENMEISTER mentions the presence of cysticercous in the brain, the inflammatory consequences of which, with their symptoms, being easily mistaken for tubercular meningitis. Prof. VIRCHOW considers two-thirds of all the cases of infantile hydrocephalus to be attributable to tuberculosis. Frequently cerebral hyperæmia sets in, in such cases, the gray substance looking anæmic, the white one, dark red, and takes a very rapid course; and in a number of cases there are very thin tubercular nodes easily escaping observation in the choroid plexus.

JOSEPH H. WYTHES reports in a short article, three cases of apoplexy, with sudden death in children, the post-mortem examinations of which are herewith given in his own language: *First case*—Child three years old. "An extravasation of blood was observed between the cranium and dura-mater, perhaps half a fluid ounce. The vessels of the membranes were much injected, and the posterior part of the septum had a large clot of blood in it. The membranes were also in many places strongly adherent. The white substance of the brain was full of bloody dots or points, with the appearance of infiltrated blood in the posterior lobes, particularly on the right side. The right ventricle had in it a clot of blood, with serum."

*Second case*.—Child three months old. "The vessels of the arachnoid and pia-mater were considerably congested, and the whole cerebral substance was softened, being about the consistence of melted butter. A little serum was observed at the base of the left hemisphere of the cerebrum, but nothing abnormal in the ventricles. The membranes of the cerebellum and medulla oblongata, were strongly congested."

*Third case*.—Child three months old. "The membranes of the brain healthy, but its substance much congested. On slicing, it seemed full of bloody dots. A small clot of blood was found in each ventricle."

Dr. LODGE reports the case of an infant, six weeks old, suffering from symptoms of poisoning after having been given a teaspoonful of syrup of poppies. The administration of a mustard-bath, and the ready method aroused the child after some hours, at once producing a copious perspiration.

Dr. SCHULLER publishes a case of poisoning by syr. diacod, administered to a new-born infant. Patient recovered after nine hours.

Dr. MURRAY reports two cases of poisoning by opium in young children, in which the treatment proved successful. An infant aged twelve months and a day, was allowed to swallow a quantity of laudanum equivalent to three grains of moist opium. Some hours were lost before help was procured. Tickling the fauces with the finger and with a feather, the administration of mustard in tepid water, an emetic of ten grains of sulphate of zinc in tepid water, the sponges of Kemp's battery in the course of the phrenic nerve, proving unavailing, the stomach-pump was used with good effect. Then the child

was placed in a warmed bed, with hot bottles to his feet; hot blankets were applied from time to time, and sensation was kept up by frequent shocks from the electro-magnetic coil-apparatus. The symptoms appeared to be alleviated when the cutaneous excretion became copious, a fact in which Dr. Murray sees more than mere coincidence. Opium seems to him to be excreted by the skin, while the emission of every other discharge is impeded. For it frequently happens that on a post-mortem examination of persons destroyed by opium, no trace of the poison can be obtained (Pereira, ii., 2104; *Christison on Poisons*, 4th ed., p. 698). Either, therefore, the constituents of opium are really present in the dead body, but cannot be detected by any known tests, or they are digestible and assimilable; or they are got rid of by cutaneous excretion. Another child, seventeen months and two weeks old, took a solution of  $\frac{9}{8}$  grains of the muriate of morphia. As four hours and a half had elapsed since the administration of the poison, the application of the stomach-pump was considered to be unnecessary. Strong coffee was administered at short intervals, and galvanism employed to keep the child awake. Then the child was enveloped in hot blankets before a strong fire, until an hour and a half later, when the skin was in a state of profuse perspiration.

Dr. Murray adds the following valuable remarks: With regard to the operation of opium on the human system, infants differ from each other as widely as do adults. Numerous cases might be quoted in which a few minims of laudanum have proved fatal to young children. (See Beck in *Med. Gaz.*, 1843-44, p. 767). For instance, Dr. F. Kelso records a case (*Lancet*, 1837-38, i., p. 304), in which a child nine months old was killed in nine hours by four drops of laudanum. In another case, a child between five and six years old, died in thirty-six hours from having taken an amount of paregoric containing from three-quarters of a grain to one grain and a quarter of opium (*Guy's Hos. Rep.*, April, 1844, p. 32). In a third case, a child aged seven months, was killed by a dose of paregoric, equal to a quarter of a grain of opium (*Pharmaceut. Jour.*, April, 1845, p. 467). Dr. Taylor cites the case of a child, four and a half years old, who was killed, in June, 1832, by a dose of four grains of Dover's powder, containing not more than two-fifths of a grain of opium (*Guy's Hos. Rep.*, 1844, ii., p. 41), and Dr. Christison mentions an instance in which the administration of three drops of laudanum in a chalk mixture, for diarrhœa, "to a stout child, fourteen months old, was followed by coma, convulsions, and death, in about six hours" (*On Poisons*, 714). The only authenticated instance on record, which Dr. Murray knows of a child that has survived such a dose as was administered in the two cases detailed above, is given by Mr. Calahan in the *Dublin Med. Press* for April 22, 1846, p. 244. (See also Blanc's case, cited by us from *Bulletin de Thérapeutique Médico-Chirurgicale*, Nov. 17, 1857, p. 452, in the *N. Y. Jour. of Med.*, Jan., 1858, p. 117; and Chamberlain's case, cited from the *Boston Med. and Sur. Jour.*, Dec. 3, 1857, in the *N. Y. Jour. of Med.*, March, 1858, p. 385.)

DR. CHAMBERS cited a case of a boy who had a fit and symptoms of cerebral inflammation, which he recovered from; yet on the boy dying

some months afterwards of tubercle in the lungs, old adhesions and tubercles were found in the arachnoid. So that meningitis even of a tubercular character, may be cured.

In *Lancet*, Aug., a case of chronic congenital hydrocephalus, is reported. The child was already in a drowsy and semi-comatose condition. A trocar and canula were introduced into the coronal suture, an inch from the middle line, and seven or eight ounces of a clear, pale fluid were withdrawn. Soon after, indications of relief and liveliness were perceived. Four days afterwards, ten ounces were removed from the posterior part. After four days, the child was more restless than drowsy. Health was, however, improved. The child was reported to have died later, apparently from inanition.

MR. LAWRENCE performed the same operation on the head of an infant of nine weeks with congenital hydrocephalus, the chief protuberance being backward, the forehead very slightly enlarged. The child was dull, almost in coma; by means of a small trocar, eight ounces of albuminous, very alkaline, and, on the addition of acid, effervescing serum, of 1009 spec. w., was removed.

DR. HEYFELDER operated on a girl of fourteen months, who had been born with hydrocephalus, and whose mental development was very rapid, while the physical one was very poor. She had eight incisors and two molar teeth; dentition having always been very troublesome. There was no locomotion, because the head always wanted support. When nine and ten months old, her head was punctured twice, and an ounce of a clear serum was removed each time. When fourteen months old, the circumference of the head around forehead, temples, and occiput, was twenty-one inches, from the forehead to occiput, over the vertex, twelve inches, from ear to ear, thirteen inches. The head looked like a triangle, the basis being above, the point being formed as it were by the chin. The face was folded, and like that of an old man, the bulbi were not completely covered by the eye-lids, the sclerotica had a dirty tint. Teeth were badly developed, sagittal suture between large and small fontanels was  $1\frac{1}{2}$  inches wide. Puncture was performed in the middle part of the large fontanel; three bottles full of a transparent clear serum, of alkaline reaction, was removed. In the twenty-four hours following, much more serum flowed out; on the third day the child grew restless, and had slight convulsive motions in her hands; sopor followed, and the child died on the seventh day. The ventricular and third ventricles were extensively enlarged; the cerebral substance around the lateral ventricles were only a third of an inch thick; all the cerebral parts were found to be present, but plain and atrophical; the aperture made by the trocar was still seen. There were still three pounds of serum in the ventricles.

Six-and-thirty years ago it was known to Sir Gilbert Blane, that it was possible to get rid of encephaloid effusion by mechanical pressure, the means employed being bandages and adhesive strapping. Dr. PHILLIPS, in two cases he reports, constructed an elastic hoop, or fillet, with strong india-rubber webbing, two inches wide, with which to encircle the head. Having made the fillet purposely too small in the girth, he was enabled, by stretching it with both hands

from within, so to adjust it as to exercise a considerable amount of well regulated pressure around the distended cranium. Some days after adjusting the elastic fillet, the bands became loose by the cranial bones having approximated each other. There was also less tension of the scalp. After a short time the fillet had to be readjusted again, until the cranial bones touched each other. A cure was effected in both cases. Naturally, the earliest possible age, and where the case is not of long standing, are the conditions most favorable to remove, by pressure, the atonic, passive condition of the meningeal vessels, resulting from absence of that resisting medium offered by the healthy, normal calvarium. Besides, the elastic fillet seems to be very much preferable to bandages and adhesive plasters, which would need removing in short intervals, as soon as diminution of bulk begins, not to speak of the troublesomeness of the removal of a number of adhesive straps from the hairy scalp.

Dr. BRISTOWE records the case of a boy of  $2\frac{1}{2}$  years, who had been healthy up to the end of his second year. He died of hydrocephalus, all the ventricles being immensely dilated. In the posterior fossa the under and back part of the cerebellum consisted of cancerous matter, of the size of a walnut, adhering firmly to the dura mater. One or two pea-sized hemispherical growths, of the same nature as the above, were discovered growing also from the parietal arachnoid of other parts of the posterior fossa.

Dr. DAVIS describes the skull of an individual who died at the age of twenty (sixteen years before the cranium came into his possession). When the subject was about seven years of age, the characteristics of hydrocephalus made their appearance, and made such gradual encroachment, that no visible decay of intellectual power was at any time strikingly exhibited. Cadaver not over four feet in length. The frontal, occipital, and temporal bones are beautifully exhibited in their attachments; but the parietals wanting their superior articulation form but one bone. Its admeasurements are :

Horizontal circumference.....	2 ft. 10 in.
Anterior perpendicular circumference.....	2 " 1 $\frac{1}{2}$ "
Central " " .....	2 " 1 $\frac{1}{4}$ "
Posterior " " .....	2 " 3 $\frac{1}{4}$ "
Vertical antero-posterior " .....	2 " 11 $\frac{1}{2}$ "
Antero-posterior diameter.....	1 " 4 " "
Vertical " .....	9 " "
Biparietal " .....	8 $\frac{1}{2}$ "
Length of right par. bone from ant. inf. to post. sup. angle.....	1 " "
Distance between the post. inf. angles of the par. bones..	1 " 4 $\frac{1}{2}$ "
From alv. process of sup. max. to union of sagittal with coronal suture.....	9 $\frac{1}{4}$ "
Length of os frontis.....	9 $\frac{3}{8}$ "
Breadth " " .....	1 " 4 " "
Length of crista galli.....	1 " "
Sella turcica.....	1 " "
Petrous portion of the temp. bone.....	3 $\frac{1}{2}$ "
Infer. petrosal sinus.....	7 $\frac{1}{2}$ "
Thickness of skull.....	1 $\frac{1}{2}$ "

Dr. GRAHAM reports the case of a little girl, two years and a half old. There was no pain on pressure being applied to the region of



the stomach and bowels, though there was the most urgent desire for cold water, which was immediately rejected. The skin was cool; the pulse 88, soft, and moderately full; the tongue thickly coated to the point, and red around the edges. The bowels were confined; there was constant picking at the nose and angles of the mouth, and the child awoke suddenly screaming from short sleeps; the countenance was occasionally flushed, the urine high-colored and scanty. There was, on the next day, strabismus, dilatation of the pupils, grinding of the teeth; the pulse was small, and very feeble; the face pale and collapsed. The child had suffered two or three convulsive seizures. In fact, all the usual cerebral symptoms, met with in the two opposite states of overfullness and of deficiency of blood, were found. The treatment consisted of some doses of castor oil, repeated enemata, and the strongest stimulants given in short intervals. The child was entirely well after four days. We have seen many cases in which inanition was the only cause of severe cerebral symptoms; but we do not find, in the history of the case before us, the least proof of its belonging to the kind of cases referred to. Besides, it is well known that convulsions and other cerebral symptoms are not rare occurrences, from no other cause but continuous obstipation of the bowels, with or without gastric catarrhus, flatulency, etc. For all these cases enemata and purgatives are the best possible remedies, although the consecutive cerebral symptoms appear to be of the extreme severity, and show their wholesome effect in a short time. In the case reported by Dr. Graham, we do not know, indeed, if his diagnosis was the correct one, although he affirms that, by the writings of Abercrombie, Marshall Hall, Gooch, and Evanson and Mannsell, he has learned more about these things than "the general practitioner."

AYRES reports the case of a congenital deformity, said to differ from encephalocele and hydrocephalus, although appearing similar to the latter.

DRS. VALENTA and WALLMANN call hydromeningocele such tumors about the cranium which are filled with arachnoid fluid and formed and enveloped by the meninges, pressed through a cranial aperture. Thus the difference is at once given between it and encephalocele and hydrancephalocele. Some new cases of the author are then communicated, and the nature of different varieties of hydromeningocele described. Hydromeningocele, in the fœtus and in infants, may be found without any alteration of the brain; of this class there are twenty instances in the literature: or the brain is found destroyed and other malformations present; of this class medical literature numbers eleven cases. Hydromeningoceles, in adults, are rarely met with; Dr. Wallmann observed three cases, and collected two others from literature.

Dr. PECH observed three cases of encephalocele. One girl, of 15 weeks, had neither cerebellum, nor tentorium, nor falx, nor crura.

Dr. SHAW relates the case of a healthy and lively child of 3 months. Treatment was not attempted.

Dr. RAVOTH's discourse, in the Obstetrical Society of Berlin, on cerebral hernia, produced either by excessive size of the brain, in

consequence of dropsy of the ventricles, or by dropsy of the arachnoidean sac, or by retarded osseous development, or by injuries during the foetal state, contained no new particulars.

Dr. LEGROUX reported, in the *Société Médicale des Hôpitaux*, the following case of dispersed congenital sclerosis cerebri: A woman, whose eight children had been still-born, gave birth to a ninth, who appeared to be of good health. On the fourth day, the child was found dead in the arms of the mother. The post-mortem examination gave the following results: The cerebral membranes were entirely normal; so was the cerebral substance in its greater part. But on a certain number of points it looked somewhat greyish, and contained about ten small and hard tumors, of 0.01 centim. in diameter, which were dispersed in the cerebral substance, and could not be separated therefrom by enucleation. Under the microscope, they were shown to consist of fibrous tissue, which is never found in a normal cerebrum, of amorphous granular matter, and of a special alteration of the peculiar nervous tissue. The heart was filled with black and viscid blood. Within its texture, especially in the tendinous columns of the left ventricle, there were small tumors of a yellowish white color, looking very much like the cerebral tumors. The lungs were found to be pressed towards the vertebral column, and to be of a black color, with the exception only of the anterior quarter of the left lung, which was of the usual pink color, crepitated and contained air.

A girl, of two years of age, fell out of a third-story window on to the pavement. The right arm was broken, the back much bruised, the face scratched, the child was insensible, and presented symptoms of concussion of the brain. These passing off in two days, the child was lively and healthy.

Dr. BRIERRE DE BOISMONT made the following remarks, in the "Institute," on mental alimentation: Mania, or rather "perversion of instincts with exaltation," is most frequent in young patients. Of 30 cases, the antecedent history of which could be learned, there was in 18 a hereditary disposition. The parents, besides attacks of insanity, were of an extremely sensitive and eccentric character. The children born of them were sometimes of an extremely melancholy, sometimes of a highly gay turn of mind, always changing in their disposition. In the 42 patients observed and recorded by Brierre de Boismont, insanity became manifest towards puberty. The influence of these hereditary transmissions appears to be almost unknown to educators; the author declares himself satisfied that in many cases insanity is the consequence of this ignorance. The prognosis is unfavorable. Nearly half of the number of patients were registered as being cured, some time or other, but there were a number of relapses, changes of character and temperament in such a degree, as to disable the patients to take a position in life and follow a business.

Dr. HOMO, from a number of cases observed at Bicêtre, draws the following conclusions: That mental derangement, beside the cases produced by alcohol, belladonna, haschisch, opium, lead, etc., is mostly the consequence of a hereditary predisposition, particularly in chronic affections; that the parents of mentally deranged persons

have been either deranged themselves, or subject to diseases bearing on the nervous system, as alcoholism, cancer, and phthisis ; that deranged parents, generally have children either dying in early age, mostly of convulsions, or affected with scrofulous or phthisical diseases ; but that this hereditary transmission is not positively necessary and indispensable.

Dr. HEWITT reports three cases of congenital hydrocele of the neck. The first is that of an infant of a month of age, who was born with a cyst on the right side of the neck, of the size of a rather large orange. It was punctured, and several ounces of fluid were withdrawn. The cyst was unilocular. Iodine was injected afterwards. The case was still under treatment when reported. The second case was observed in an infant, also. The cyst had been punctured, but no injection having been made, it grew again. The third occurred in a young lady, who was operated upon when a child. The tumor had been dissected out, but a small bit adhering to the subclavian artery, was left. Now, in the age of 14 or 15 years, a tumor occupied the same situation. Two threads were passed through it to act as setons, pus and foetid matter were evacuated, and a speedy recovery obtained.

Mr. Russ reports shortly, indeed, very shortly, a case of probable acute spinal meningitis, in a boy of three years of age. The doctor administered, every three hours, one grain of calomel, and two grains of Dover's powder. The child did not stand it.

Dr. GAUNE reports the cotemporaneous occurrence of a number of nervous symptoms in 19 girls, of from 9 to 21 years of age, residing together in an asylum. All at once, or after some nervous prodromi, lasting for 24 days, the patients lost the power of locomotion, complained of pain in the lower extremities, and along the vertebral column, which was aggravated on pressure, and suffered from spasms. Opisthotonus was present in three of the patients. General and local bloodletting, laxatives, and opium, were the common and successful remedies. Nothing abnormal could be found in the food ; therefore, Dr. Gauné searches for the common cause of the disease in the condition of the atmosphere. Dr. GUNSBURG, when reviewing Dr. G.'s report, reminds his readers of a well-known occurrence of a similar kind, in Franke's Orphan Asylum, at Halle, where the cause was found in nothing but a degeneration of instinctive and involuntary imitation.

A case of spina bifida in a new-born child came under the observation of Dr. GREEN. This deformity is rarely uncomplicated, but the complications in this case are somewhat interesting. There were "two appendages to the sac, resembling the mammae of women ; a large hernia between the umbilicus and the symphysis ; some small openings through which the urine was continually trickling, but which could not be followed up by the probe ; the testicles, 'perfectly formed, were hanging pendent from the middle of the symphysis ;' there was no penis, the anus was complete and perforate at the extreme anterior portion of the perineum, next to the symphysis ; at the point of the os coccygis was another anus, which proved to be a cul-de-sac."

Dr. WILSON reports the case of a child, a few days old, with spina bifida of about the size of a small orange, rising by a neck nearly an inch in diameter, from the middle of the lumbar vertebræ. A ligature was applied not very tightly at first, and a new one put on every day. The tumor enlarged considerably, and it was frequently punctured with a fine needle. It was not till the fourteenth day after the first application of the ligature, that the sac began to shrink and shrivel up. The small sore left on the eighteenth day, when the tumor fell off, gradually healed, by the use of simple water-dressing combined with pressure, and a firm cicatrix was formed in the space of three weeks. Before the closure of this sore, a slight fissure, or defect in the spinal canal, through which the tumor protruded, was distinctly felt.

Dr. JACKSON reports an interesting case of spina bifida, this malformation being accompanied by a number of others. The duodenum terminated in a cul-de-sac just before the bile-duct opened into it; the rectum opened into the bladder at its fundus. The bladder was exceedingly small, and the urethra so narrow, as not always to allow air to be forced through.

Dr. ADAMS exhibited a specimen of spina bifida, which had ruptured in utero, the child living 4 days. Another case of spina bifida was also ruptured during labor, the child living 19 days. In this specimen, the caudæquina passes into the sac, its nerves traverse it, and then emerging from it are normally distributed.

Prof. LUSCHKA publishes a case of perineal cystic hygroma, of immense size, the tumor extending from the lower part of the pelvis down to the foot on the right, to the calf on the left side. It was multilocular, and contained clear, salty liquid, of straw color, and neutral reaction. The single loculi were perfectly separated from each other, and their inner surface was covered with epithelium. A most curious combination of this hygroma was that of inclusion of a fœtus. There was a tumor connected with the hygroma by a long pedicle, round, soft, and grayish-red, of  $4\frac{1}{4}$  ounces in weight, which contained beside an œdematous, adipose cellular tissue, a cartilaginous and osseous mass, in which muscular substance, a piece of intestine, and some corpuscles representing either kidneys or testicles, and one showing the shape, but not the microscopical tissue of the liver were found. There were, besides, pretty large blood-vessels connected with the hypogastric artery and vein. The hygroma being perfectly like the cases formerly described, it cannot be decided whether it was an integrating part of the fœtus in fœtu, or whether hygroma and fœtus in fœtu were independently coördinated.

Dr. LEACH observed spina-bifida in a child who lived about three weeks. Particulars are not noted, except the complication with paralysis of the lower extremities, prolapsus uteri, and discharge of mucus from the vagina and os uteri.

Another case occurred in the practice of Mr. COGLAN, in which the tumor had ruptured during labor, and the child lived nineteen days.

Dr. EBRA has a favorable opinion of injections of iodine, made for the purpose of curing spina-bifida. He reports fourteen cases treated

with such injections by different writers ; ten of which are said to have been cured, one to be doubtful, one unsuccessful, and two to have died in consequence of the operation. The diagnosis is doubtful in almost all the cases, a fact which greatly enhances the value of the above-given statistics.

Dr. ROBIN'S dissertation is of some interest, because the French literature has been well searched for the results of several methods of operation, compression, puncture, seton, excision followed by suture, ligature, transformation into a cyst, injections of iodine.

Dr. BEHREND republishes, with instructive notes, 20 cases of spina bifida from the literature on the subject, with preceding careful pathological and diagnostic investigations. There is one point in which we disagree entirely with the author. He believes that after the puncture of spina bifida has been performed, the position of the spine may be detected by means of the pain produced by the sounding instrument. We know from experience, that such is not the case. In a new-born infant, on whom we operated, by puncture and injections, seven or eight different times, and whom we examined carefully more than twenty times, the spinal cord was in its entire mass attached to the outer wall. Now, we have never observed any particular pain in sounding or injecting, so little so indeed, that we were unable to account for the nature of the transverse inner wall our instrument was always in contact with.

The indications and contraindications of operating on spina bifida, in the opinion of Dr. Behrend, are the following :

## INDICATIONS.

1. The child generally well formed ; spina bifida, an isolated and single tumor, without complication.
2. The tumor is pediculated.
3. The skin normal, not ulcerous.
4. Pressure on the tumor produces little or no pain.
5. Displacement of the tumor is painless.
6. Fluctuation inside the tumor easily and equably felt.

## CONTRAINDICATIONS.

- Presence of other malformations, as : hydrocephalus, umbilical hernia, paralysis and deformity of limbs ; tumor double.
- The tumor is not pediculated, has a broad basis, particularly in its vertical direction.
- Skin abnormal, incomplete, or ulcerous.
- Tumor very sensitive, particularly on pressure upon its most prominent part.
- Displacement is very painful.
- Fluctuation not equable, particularly when deficient on the most prominent part of the tumor.

In each case, the safest way will be not to operate, when only one contraindication is given in the complex of symptoms. The modes of operation hitherto resorted to, are the following : 1. Direct compression by some or other apparatus. 2. Direct or subcutaneous puncture, with compression. 3. Slow compression around the pedicle, to produce adhesion, and finally excision. 4. Ligature of the pedicle, and excision. 5. Excision and suture. 6. Seton. 7. Seton and compression. After having exposed the danger arising from even a slight traumatic insult, the tendency to inflammation, ulceration, and erysipelas, Dr. B. describes a case of undoubted spina bifida, of the size of a small orange, cured by slow compression, at first by a mixture of collodion and castor oil, afterwards by collodion alone. The

tumor diminished in the course of some weeks, and had entirely disappeared after some months. At the same time the child took regular doses of calomel, in order to prevent meningitis, and produce absorption. By cold applied to the head, the effect of the calomel was increased. At last Dr. B. proposes to try, together with calomel, small doses of digitalis.

Of the three cases of cystic hygroma, recorded by DR. GLASER, the author has observed one himself, the two others Dr. Keller, of Philadelphia. In each of them the tumor produced dystocia. Dr. Glaser refutes the opinion of Prof. Wutzer, that young cysts contain a limpid, older ones a bloody, the oldest ones a tar, or chocolate colored serum; for he describes a cyst of cartilaginous hardness, and with walls one-sixth of an inch thick, containing a yellowish serum. One of the cysts ruptured before birth. Another was separated from the pelvic cavity by nothing except the thin fascia pelvis, and was observed to alter its position with every expiration or inspiration, to such a degree, as to induce the author for a while to believe the hygroma to be complicated with spina bifida. Each of the three infants was operated upon, the hygroma being punctured. In the first, the operation was performed on the eighth day after birth; the child died some hours afterwards. A quart of a brown, and finally bloody liquid was removed. The second tumor was punctured to render delivery possible. A gallon of a bloody serum was removed. The child died after some hours. The third tumor consisted of three cysts, the larger of which contained from three to four pounds of a thin and somewhat bloody serum; in the two smaller ones, the liquid was yellowish white. The child died 124 days after the operation had been performed.

DR. KEILLER reports a fatal case of chorea in a girl, *æt.* 15, who had not slept for nine nights. Then the symptoms subsided, and came on again. She took a hearty breakfast, was prostrated with coma for two hours, and died. The urine before death was highly albuminous. With the exception of several vegetations at the mitral orifice of the heart, no particular morbid lesion was detected.

DR. DAVID reports some cases of chorea, and asserts that he has treated many cases of chorea, occurring at different ages, and in both sexes, with arsenic, with complete success, in from two to six weeks. We report this mode of treatment as a mere fact, there being nothing new in it, and arsenic having been in use for chorea for a long period.

MR. GILLETTE gives tartar emetic in chorea in the following manner, as described in a dissertation, written by Emile Adolphe Bonfils (*De l'emploi de l'émétique à haute dose dans une série de chorées*). About four grains of the drug are given on the first day, about eight on the second, about twelve on the third. Then it is omitted, in order to avoid the accumulation of the effect of the medicament. If necessary, somewhat larger doses are given in a second course, when a sufficient time has elapsed after the first one. Three courses have very seldom been found to be necessary. The number of observations recorded is large enough to attract the attention of, and trials by the profession.

DR. ROGER publishes twelve cases of chorea treated in the manner of Gillette, and recommends the following treatment. He gives tartar emetic in nothing but sugar-water, and to children of from seven to fourteen years of age, in nearly equal doses. The first day, 20 centigr. of tartar emetic are given in 100 grammes of sugar-water; of this solution the patient will take a spoonful every hour, until severe vomiting or diarrhœa will ensue. It is better tolerated on the second day, when 40 centigr. are given, and on the third, when 60 centigr. are taken. Meanwhile the symptoms of chorea have become slight, and the pulse has diminished in number: at all events, medication is stopped for some days; if it has to be repeated, the doses are of 25, 50, and 75 centigr. A third term, instituted after the same principle, would require doses of 30, 60, and 90 centigr. of tartar emetic in 100 grammes of sugar-water. Of Dr. Roger's twelve cases, nine recovered rapidly, two felt only short ameliorations, in one the treatment failed completely.—A case of a young man of eighteen years of age, in whom tartar emetic failed to effect a cure is also reported.

DR. WIBLE publishes an article on the pathology and treatment of convulsions, founded mainly upon the teachings of Dr. Marshall Hall. According to him, "the nerve-force is impressed in convulsions: 1. By irritating agents making an impression on the elements of the nerves, the impression being sent along the nerves to the spinal centres, and thence reflected to the muscles. 2. By irritating agents, such as foreign substances making an impression directly on the centres; inflammation, or its effects; and poisons, or morbid materials, circulating in the blood, exciting the nerves directly. 3. By mental emotions which are known to act on the spinal centres, causing them to send out motor impulses." We shall not further illustrate these general principles, because we do not agree with the author in his opinion on a leading error prevailing, in his opinion, almost all the standard books and dissertations on convulsions. For it has been well known, even as far back as the time of J. L. Brachet (*Traité pratique des convulsions dans l'enfance*, 1823), that convulsions are not dependent, necessarily, upon a morbid condition of the brain; and there is scarcely any work on diseases of children generally, and convulsions particularly, which did not, long ago, contain the same physiological views on our subject as Dr. Wible's. Without, then, detracting from the value of his article, we have, as a reviewer, simply to state, that, good though its contents may be, they are not new.

DR. ASHENHEIM again publishes one of his unheard of pathological curiosities, viz.: the case of a black girl, of nine years, dying "from fright," and exhibiting, in the post-mortem examination, nothing but the remainder of "old inflammations of internal organs."

In DR. MOYNIER'S opinion, more or less marked anæsthesia of the limbs suffering from chorea (in the majority of cases the left side) is a frequent symptom. Atrophy and weakness of the diseased limbs, persistent even after a perfect cure is established, is often observed. In one case paralysis preceded. The author confirms in one half of his cases, the opinion of Stahl, Bonteille, and Bright, on the compli-

cation of rheumatism with chorea ; but not at all the assertion of Dr. Sée, that febrile diseases have a favorable influence upon chorea. The duration of simple cases is from fifty to eighty days ; the whole number of deaths, found in literature, were five ; in all of them post-mortem examinations yielded no particular result. The author knows seventeen cases of pregnancy complicated with chorea. Three of them were interrupted by abortion, whereupon chorea healed ; nine reached their normal end ; four were cured before delivery, five after.

DR. BOURGUIGNON, after enumerating all the remedies recommended in chorea, counts among the causes of the disease and the remedies indicated the following :

1. Rheumatic diathesis : contrastimuli, tart. em., sulph. chin., Iodide of Potassium ; after the disease has been removed : tonics, gymnastic exercises, sulphurated baths.

2. Chlorosis : Iron, sulphurated baths.

3. Scrofula : Iron, sulphurated baths, iodine.

4. Syphilis, Iodide of Hydrargyrum, Iodide of Potassium.

5. Pregnancy, where no exostosis is present : derivatives, sedatives, purgatives ; but neither will probably be successful.

6. Masturbation : Bromide of Potassium, electricity, and topic nervina.—There is no new fact in these expositions, for every reasoning physician must and will individualize ; nor will he forget that "chorea" is but a name for a number of symptoms. As to the result of chorea during pregnancy, our experience goes to show that chorea will pretty readily disappear.

DR. O'GRILLA discriminates diphtherite beginning in the fauces from that affecting the tongue first. He further mentions the cases of two children exhibiting more or less symptoms of paresis after diphtheria had preceded. He compares these facts to the extension of inflammation from the contents of the pelvis to the membranes and segments of the cord, which has been observed to produce paraplegia in some instances.

Convulsions being essentially modifications of vital actions, and all vital actions being accompanied by, and depending on, physical changes in the organism, convulsions must depend on modifications of physical conditions. Though no "lesion" is discoverable, we are warranted in the concession that nutrition is affected. Such is the theory of DR. REYNOLDS, and certainly it is a good one, for nothing is more injurious to the progress of pathological science than the belief that diseases of any system can be found without a material change being present. What is unexplained to-day, must not be said to be unexplainable.

DR. SIMPSON, in cases of convulsions, which seem to exist and continue without any acute or appreciable lesion of the nervous centres, and without any recognizable point of irritation in the peripheric parts, recommends the use of chloroform, which he, in one case, continued for twenty-four hours, except when it was necessary to feed the child, in another case he kept the child, more or less, under the influence of chloroform for fourteen consecutive days. DR. LAWRENCE reports the case of convulsion in a child one month old, who had been out in



cold weather, and was affected with attacks of convulsions, as many as forty-nine in twelve hours. Evacuants, turpentine, ether, etc., were used in vain; then carbonate of iron, gr. iv., was given every two hours, and the child got well. He concludes that, "if all offending matter has been got rid of from the stomach and bowels, and other existing sources of irritation removed, if the circulation is tranquil during the intervals of the paroxysms, and if no organic change is associated with the malady, the exhibition of the iron cannot be too soon begun." "The essence of such diseases lies in a hyper-mobility of the spinal or reflex system of nerves." No other diagnosis was made in the case related. We dare say that where all those conditions are fulfilled, convulsions will usually disappear on their own account.

DR. WEST treated three cases of tetanus successfully with spirits of turpentine and opium. To one patient, a girl of ten years of age, he administered four ounces of spirits of turpentine and sixty grains of opium in six days. There was not the slightest irritation of the kidneys by the turpentine, nor the least narcotism by the opium.

DR. LAUDERDALE reports, that of eight negro children born in the same house within twenty months, four boys were attacked by trismus nascentinum, while four girls were not at all affected.

DR. NEUDÖRFER reports to have observed spinal symptoms, after chloroform was administered, in three cases. In a girl of two and a-half years, there were spasms first in the upper extremities, then in the lower ones, finally, opisthotonus. The intensity of muscular contractions was such as to make afraid of fractures of the bones.

DR. GIBB reports an interesting case of hemiplegia in a still born child. A child born with placenta prævia and prolapse of the funis, had the elbow, finger, knee, and toe-joints of the left side completely inflected, to such a degree as not to allow of extension, even by force. The cause was found to consist of the residues of an old extravasation in the right cerebral hemisphere; the left parietal bone was remarkably ecchymotic, and the pericranium was easily removed by the finger. Perhaps the morbid process was depending on a kick inflicted upon the mother, on the right side of the abdomen, some three months before her confinement.

Since the essays of Badham, Dance, and Heine, "essential paralysis" of children has not been made the subject of a monograph. PROF. VOGT treats this troublesome disease under three heads, according to the central or peripheric seat of the paralysis, taking as granted, that the nervous system, either in the brain, or spine, or in the peripheric course of the nerves, must be the cause of it. Differential diagnosis between cerebral and spinal, and again spinal and peripheric paralysis is sometimes very difficult indeed, and requires accurate observation of all the symptoms. The pathological anatomy is collected in the following results of post-mortem examinations, mostly made where the patients died in the acute eclamptic and cerebral attack of paralysis. There is hyperæmia of the brain and its membranes, which, whether it is cause or consequence of the eclamptic attack, Brachet says it is not yet decided. So much is certain, that eclampsia is more frequently the consequence of a primary congestion, even where the patient suffered from anæmia before;

only in cases of consensual eclampsia, congestion may be considered as the result of the attack. If the congestion is diffuse, eclampsia is general ; where it is partial, the attack too, is only partial. Its next effect is either irritation or pressure on the roots of the nerves, which lasts as long as the congestion ; sometimes paralysis may remain, although there is no more direct pressure, only by the gradual alteration of the nerve ; of this kind are those cases particularly, where general paralysis gradually disappears, leaving only a single limb paralyzed. In cases of congestion, exudation is a frequent result, but is not necessary, according to Frederick, for paralytical effects, which are observed without it. In many cases of eclampsia, no congestion or exudation is found, no organic change seems to have taken place ; this may be explained by the fact, that uncoagulated blood is liable to flow back into the body after death, and that small exudations in the white substance, although sufficient to produce death, are difficult to find. In some cases, meningeal products, and hydrocephalus is met with. If eclampsia passes without producing death, and the cases come to post-mortem examination at a late period, the consequences of inflammatory lesions are sometimes discovered, as condensations, cicatrices, and cysts, with or without destroyed cerebral particles.

After such results of post-mortem examinations, Rilliet and Barthez are certainly wrong when considering the essential paralysis beginning with cerebral symptoms, as merely "a functional trouble of the brain ;" neither is Bouchut right, who considers the influences producing infantile paralysis, as merely peripheric.

Heine and West take the vast majority of cases to be of spinal origin. In the spine the same pathological alterations, as described in the cerebrum are found, or not found. Extravasations are not so frequent as in the brain, but some cases are described by Ollivier and Hutin ; they produce either convulsions or, by pressure, paralysis. The usual effect of mere hyperæmia of the spine and its membranes are tonic spasms and paralysis, sometimes convulsions.

Cases of peripheric infantile paralysis gave very scanty results, a fact which is easily explained by the exceeding difficulty of finding alterations in the peripheric course of the nerves, and by the length of time that elapsed between the first paralytic attack and death. Rilliet and Barthez made two post-mortem examinations, in which nothing was found. Fliess found in a case of paralysis of the arm congestion of the spinal membranes about the height of the bronchial plexus.

After all, Prof. Vogt draws the following conclusions on the nature of infantile paralysis : 1. Infantile paralysis, which has been called essential, is a nervous paralysis. 2. It is the residue of a disease going along with material alterations in either the nervous centres or nerves. 3. The material alterations cannot be anything else but congestion, or inflammation with its consequences. 4. They may be removed, sooner or later, by natural processes ; thus either the paralysis is also removed, or it continues in such cases where the nerves have lost already their irritability.

Of particular interest is the opinion of Prof. Vogt on primitive con-

tractions, which have been declared a disease *sui generis* by Tonnelé Constant, Guersant, Baudelocque, Weisse, Küttner (who devised the frightful name "arthrogryposis"), and Rilliet and Barthez. Helft and Rust believed in their identity with infantile paralysis, because of the identity of the alterations of the nervous centres. It is their and Babauds opinion (*De la contracture des extrémités chez les enfants* ; Union Méd. 1855, Nos. 97 and 98), which Prof. Vogt adopts (as also Hirsch, professor at Königsberg, in his "Clinical Fragments," 1857).

We omit to say anything on the symptoms of primary contractions, which perhaps each of our readers has had the opportunity to observe, and for the same reason we give no differential diagnosis of primary and secondary contractions, but simply state, that primary contractions (of the flexor muscles), are always combined with paralysis of the extensors, so much so, that whenever the contraction ceases, hand or foot cannot be extended. Primary contraction, when of a cerebral nature is always painless. If it is of spinal origin, there is pain in the neck and between the shoulders ; the dorsal muscles are strained, and the contraction can be reduced only with pain. If it is of a rheumatic nature, there is great pain from motion and pressure ; the limb is inflexible by force, the carpal joint is red and swollen ; a swelling which must be discerned from the atonic œdema following upon anæmia and cachexia, and upon thrombosis of the veins.

We abstain from further extracts, because the whole little book is so short and concise in its expositions, and so rich in its facts as not to allow of abbreviation without detracting from its value. One chapter we shall dwell upon at some length, as soon as we come to the review of Dr. Friedberg's work on the pathology and therapeutics of muscular paralysis, viz. : "the progressive atrophy of the muscles." The length of these reviews, however, does not permit us to occupy the attention of our readers any longer ; thus we omit giving extracts from Prof. Vogt's therapeutical expositions. In general, we can say, that we seldom have perused any monograph of the length of this one, that has a greater abundance of facts and truths in a short space, that is at the same time written in a style so clear and modest, and stands firmer on the basis of modern scientific medicine. The old Swiss professor appears to have preserved the full vigor of youth and scientific enthusiasm to his advanced age of more than "three-score and ten."

## VII. SKIN AND SENSORY ORGANS.

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Dr. MORRIS' book is an enlarged edition of the same author's "Lectures on Scarlet Fever" (Philadelphia, 1851, pp. 104). It is a highly valuable work, from the very fact, that it contains the author's practical experience during the course of thirty years, with only occasional glances at American and English literature. Its object is simply a practical one, and, therefore, we have to regret the omission of what we are accustomed to estimate most highly in a scientific monograph, viz., pathologico-anatomical researches. Perhaps the author, if his investigations had led him to give the exact results of post-mortem examinations, would have somewhat modified his opinion, that diarrhœa, when it occurs, is to be ascribed to the irritation of the putrid colluvies swallowed from the ulcers of the throat, rather than to any direct influence of the cause of the disease on the mucous membrane of the alimentary canal (p. 105, 172). For it is as well understood, that ulceration of the glands of Peyer is a frequent lesion in fatal cases, as it is a pathological fact, that morbid affections are very prone to develop themselves on different and even remote parts of the same tissue.

In every other respect this book is written in a perfectly scientific manner; there is no uniform description of all the cases of scarlet

fever ; and the author gives no specific remedies. Although giving general principles of treatment, he advocates their proper application to each individual case, and considers nothing to be more dangerous than to adopt empirical modes of treatment and specific remedies ; for to their influence but few diseases are amenable.

Basing his general views upon such correct principles, his opinions are by far the most scientific of any we have lately had occasion to hear on the same subject. His treatment of scarlet fever, in its several forms, either "simple," "anginose," or "malignant," generally agrees with what rational therapeutics require at the present time, and what is laid down in every good modern manual on diseases of infants. There are only some particular features in the general mode of treatment of our author, which seem deserving of a special notice. The first is the administration of capsicum, in cases in which the eruption appears imperfectly developed from the first, or in which, after having been well marked, it recedes, or where the force of the attack falls upon the throat from the very beginning, causing great tumefaction and difficulty of deglutition. "Whether convulsions, or restlessness, or stupor, complicate the case, or mere languor and exhaustion, all are but varying phases of one condition, and that, a condition which is to be removed by appropriate stimulation ; and it is in these cases that the capsicum is productive of the happiest results." "Weak animal broths, freely charged with capsicum, may be given with great safety, even to the youngest infants in this condition. . . . Should there be much local disease of the throat, it will receive great benefit from the passage of the capsicum over it. I have often administered the simple infusion when the stomach rejected the broths, or when I desired to maintain a more constant local impression. The common formula of a teaspoonful of powdered capsicum, the same quantity of common table-salt, a large spoonful of vinegar, and a half pint of boiling water, is an exceedingly good one. Of this, a teaspoonful may be given every hour or two to a child of five years and upwards, followed by a small portion of the broth, or even wine-*whew*" (pp. 136, 137). "We are indebted to the West India practitioners for the introduction of this remedy to our notice in this disease. It is not only to its local impression on the throat that its beneficial influence is to be ascribed. It excites the depressed forces of the digestive organs, gives greater power to the functions of assimilation, and thus supports life by a secondary influence, even if it be not a direct nervous stimulant" (p. 145).

We fully agree with the author's opinion of the danger of cold applied externally to the head, in cases of great depression of the nervous functions. Cold is too sedative to be beneficial in such cases, although it may appear to be indicated by the quickness of the pulse. We do not, however, approve his treatment of albuminuria consequent on scarlatina. He is certainly right in asserting, that "the perseverance in nitre and diuretic remedies in these cases without first removing the local inflammation by local blood-letting, will aggravate the sufferings of the patient without producing any increase of the secretion" (p. 168) ; but we object entirely to the use



of salts, like tartrate of potassa and soda, and finally digitalis, in order to stimulate the healthy action of the kidneys. We regret not to find a single remark on some remedies, on the beneficial influence of which we have been taught, by many successful cases, to depend. We particularly allude to coluquint, and to tannic acid, so ably advocated by Prof. Frerichs, in the treatment of Bright's disease.

Serous effusions, in general, take a well merited predominant place among the complications of the disease. Our author considers cerebral effusion to be the most formidable of the sequelæ of scarlatina (p. 93), although he reports (p. 94), that "only one such case proved fatal in his experience." We have not been so successful, but must, nevertheless, assert that, in our experience in the treatment of scarlet fever, no consecutive œdema has proved so unexceptionally fatal as pulmonary œdema, when it ran an *acute* course. We know of none that recovered.

The preventative influence of belladonna, according to our author, is not yet decided upon; the experiments which have been made, give no sufficient proof for affirmation, nor for denial. "The only field for experiment is some large institution for orphan or destitute children, where it can be tried while all other means of prevention are avoided. Larger numbers than can be found in private families, and more careful observations, are necessary to settle this point."

Finally, if it was practically important to study the early history of scarlet fever, we should not stop with the poetical description taken from Seneca, which seems to prove that scarlet fever was known as a dire plague in the first century of the Christian era. There are, undoubtedly, allusions to scarlet fever to be found in the writings of Cœlius Aurelianus, a little earlier than Seneca, and very probably also in Hippocrates' works. Moreover, according to a contemporaneous English writer, it is to be considered a fact, that the plague so beautifully described by Thucydides, which devastated Athens at the time of the Peloponnesian war, was nothing but malignant anginose scarlatina.\*

The object of Mr. Wirt's pamphlet is to recommend the bicarbonate of ammonia, as the never failing remedy in scarlet fever and measles. Of the writers who have preceded him with specifics our author names Letsom (1722), Wilkinson, Peart, Ricardo, Strahl, and Riecken. If he had known the names of some others, as Malin, Bodenius, Fischer, Loewenhardt, Schlesier, Rösch, von Ammon, Stöber, Gross, Heine, and Gyrsting, he would, perhaps, have omitted to carry owls to Athens. At all events, after it has been decided upon by scientific medicine, that there is no such thing as a monarchical power in a remedy, as little as there is an absolute essentiality in a series of symptoms called a disease, it appears to be unnecessary to repeat in a special pamphlet what has been asserted a hundred times before. If we go back in search of specifics, we shall find abundant materials for pamphlets in the long-forgotten, all-saving methods of blood-letting, antiphlogistic treatment, cold

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\* CHARLES COLLIER: "The History of the Plague of Athens, translated from Thucydides, with remarks illustrative of its Pathology." London, 1857. We must confess, however, that Dr. Jonathan Osborne (Dublin *Quart. Jour.*, May, 1858) appears to be more justified in assuming the "Plague" to have been scurvy.

water, and chlorine, each of which has had its time. We think much of the bicarbonate of ammonia in cases of scarlatina, requiring powerful stimulants because of the dissolution of the blood, and general depression of the nervous functions; but we cannot say with Mr. Witt, that we have been so fortunate as not to lose a patient out of several hundreds.

Mr. MEADE, having much confidence in the tincture of the sesquichloride of iron in erysipelas, administered the same remedy in a number of cases of scarlatina with good result, in doses varying from 5 to 15 minims, according to the age of the patient, every three or four hours. When the throat was ulcerated, he also applied a solution of nitrate of silver to the fauces.

Dr. GOSLEE uniformly "or systematically" prescribes blue mass or calomel, followed by chlorate of potassa and quinine; in one, two, or three grain doses, every one, two, or three hours, and orders frequent embrocations of lard all over the surface of the body. He seems to be sadly unacquainted with the general antiseptic and antifebrile effects of quinine, as he, from the effects of the remedy, declares scarlet fever to be but "a distinct form of remittent fever, modified by its local symptoms of the throat and the eruption."

Dr. DUTCHER recommends the use of chlorate of potassa and sulphate of quinine in malignant scarlatina; Dr. MORRISON, without giving the doses, administered quinine alone; and Mr. FRANCIS orders inhalations of oxygen gas, not as a direct remedy, but for the purpose of procuring time, by its enlivening effects, for the remedies to operate. Mr. BULLEY saw some good results of warm poultices in cases of anginose scarlatina.

Dr. HUTCHINSON, after having seen many unsuccessful cases with either judicious or injudicious treatment tried, although he "*supposed it to be the product of some Dutchman's imagination*," embrocations with lard, after the method of Dr. Schneemann; which proved to act favorably in a great number of cases. The learned gentleman, Dr. H., lives at Mooresville, Indiana. Prof. LEROY declares to have no particular confidence in the prophylactic effects of belladonna; two children, after having been treated for epilepsy with belladonna for months, fell sick with scarlatina. He inoculated himself with the blood, tears, and epidermis of patients suffering from scarlatina, but never had any other result but to produce a slight local inflammation. He therefore feels satisfied that inoculation is not deserving of any confidence, nor the recommendations bestowed on it by Miguel, Noiro, Petit, Radel, and Horne.

From the records of the Francis Joseph Children's Hospital, a case of dropsy after scarlatina is published, in which the degeneration of the kidneys had gone as far as to colloid metamorphosis, which allows of no more albumen being excreted with the urine and to be found by chemical tests. Another case is reported to prove that the prognosis in hydrops post scarlatinam, in spite of albumen, epithelium of the canaliculi, and fibrinous coagulations being present in the urine, is not always fatal. Whether the cause of dropsy after scarlatina is always to be looked for in degeneration of the kidneys, is much doubted. Löschner explains it by suppression of cutaneous

functions, and the process of desquamation ; Kubik by the peculiar decomposition of the blood. In the opinions of both, the disease of the kidneys is, at most, a symptom coördinate to many others, and may just as well be absent. It must be stated, however, that absence of degeneration of the kidneys is a rare occurrence. But it is true, that dropsy is often developed, after scarlatina, so rapidly as not to allow of any comparison with a similar rapidity of a pathological process ; secondly, that in the urine of some dropsical patients, there is found neither blood, nor albumen, nor any pathological addition ; and thirdly, that the kidneys of many of them yield no results whatever from post-mortem examinations.

Dr. BOURAYNE records a number of cases of scarlet fever complicated with acute rheumatism, the nature and treatment of which he considers to be different according to the time of its invasion. Rheumatism at the period of eruption requires local applications of laudanum to the inflamed joints, calomel, mild alkaline salts, in severe cases nitrate of potassa or sulphate of quinine. Endocarditis indicates cupping and vesicatories. Such cases of rheumatism as arise at the period of desquamation, are usually of a subacute nature, and go along with but a moderate fever, but show a great tendency to exudations into pleura and pericardium ; they require tonics, vesicatories, and, from time to time, mild saline purgatives ; drastics and venesections being absolutely pernicious.

Dr. CRAIK reports the case of a child,  $2\frac{1}{2}$  years old, who being poisoned by swallowing *hyoscyamus niger*, beside the other symptoms peculiar to poisoning by *solanaceæ* had a bright scarlet color on the whole surface, exactly resembling that of scarlatina, a well defined papillary eruption, disappearing on firm pressure, but returning immediately when the pressure was removed. The mucous membrane partook of the same appearance as in scarlatina, though the strawberry tongue was not so well marked. The eruption continued for about twelve hours, and produced no desquamation referable to it.

Dr. KERSCHENSTEINER endeavors to fix the period of incubation of measles by counting the number of days between the appearance of the eruption in the first child of a family, and the one affected at a later period. He was careful in selecting cases where no other source of the infection was manifest. Out of 37 cases, the rash came out between the tenth and twelfth day in 34.

Prof. TROUSSEAU states, that there is little danger from convulsions occurring as prodromi of acute exanthems. No bleeding must be thought of. Where a croupous cough is heard, a hot sponge ought to be applied to the throat. In capillary bronchitis, and lobular pneumonia emetics, antimonials, large vesicatories, and urtication, are indicated. Epistaxis and otitis require ice, astringents, or hot water injected into the nostrils, belladonna applied to the ear. Severe pain in the intestinal canal opium. Very bad complications have been found to be the following : Bronchopneumonia, ophthalmia, inflammation of the mucous membrane of the nose, gangrené of the mouth and vulva, purpura (with epistaxis, hæmaturia, hæmatemesis, blood per anum). Convulsions about the end of the disease are mostly signs of peripneumonia ; all cerebral symptoms in this stage of the disease, are highly dangerous.

Dr. GUENSBURG remarks, that in an epidemic carefully observed by him, desquamation was generally finished about the 21st day of morbilli. He had been told repeatedly, by good physicians and intimate friends, that many cases of a second attack of measles came under observation. Transmission was easiest during desquamation. The cutaneous symptoms proved highly unimportant, as was well known already by Sydenham and Schönlein. Therefore, many cases are mistaken for either scarlatina or "rubeola."

DRS. VON DUBEN, MALMSTEN, BÖTTIGER, and LEVIN, report about ten cases of measles occurring twice in the same children, the intervals between the first and second times being from four or five days to some months. Dr. Malmsten saw measles in a man who was positive about having suffered from the same exanthem twice before. The same writer reports to have inoculated measles in his two sons, the exanthem making its appearance on the fourth day after the inoculation being performed.

Dr. JACOBI, too, has observed measles returning in a child for the third time.

No less Dr. YOUNG reports a number of cases of recidive measles. Four of the patients he observed himself. The two patients who had a severe attack of measles for the first time, were comparatively but slightly affected the second time; while one of those who had them slight before, had them very severe the second time.

Dr. VEIT publishes his observations and opinion on hemorrhagic measles; which denomination he prefers to that of former writers who believed the cause of the hemorrhagic spots to consist in a severe dissolution of the blood, and considered such cases of measles as complicated with petechiæ. Of the whole number of authors who have communicated their observations and views on this subject, but Rayer, Levi, and Rilliet and Barthez assert to have met with hemorrhagic spots in very mild cases of measles. Like theirs, is the experience of Dr. Veit, who found the hemorrhagic spots to rise in the following manner. The time of the first appearance is the second or fourth day of the exanthem, where, in the majority of cases, the eruption commences becoming paler. They are either limited to a single locality, or spread all over the surface of the body, have a still darker color in the following days, and take even a black tinge; they are round, or of an irregular shape, and of a different size up to the size of a pea or bean; frequently they form large plaques, or long stripes; they will not disappear under the pressing finger, but show the entire nature of capillary hemorrhages in the cutis. After a short time the spots undergo the same alterations which are seen in sugillations, becoming bluish, brownish, and yellow, until, after several weeks, and a copious desquamation, the skin again assumes its natural color. Dr. Veit has seen this variety of measles in every epidemic for the last seven years, eleven cases in one hundred and sixty, and generally among the poor. But it would be false to assume that poverty, with its consequences, is the principal cause of the hemorrhagic variety of measles; for poverty is common, and hemorrhagic measles are rare; and, with very few exceptions, it has been robust and healthy children who showed this particular

variety of measles ; and, finally, the concomitant fever was by no means of an adynamic, but of a sthenic character ; the course of the disease was mild and uncomplicated, and no other hemorrhages from any organ, except the nose, came under observation. After all, hemorrhagic measles are to be discerned from petechiæ arising sometimes a number of weeks after the exanthem has disappeared. The latter may be observed in children exhausted by diarrhœa, protracted sickness, and deficient nutrition, and must be considered as a consequence of a real decomposition of the blood ; hemorrhagic measles, however, are but ruptures of the capillary vessels wherever the eruption happens to be of an uncommonly vivid color, without being in the least complicated with any malignant symptoms. Thus measles show an evident difference from scarlet fever and small-pox, petechial spots in the latter being produced always and only by a severe dissolution of the blood.

The post-mortem examination of a male child of two years of age, who died of pneumonia, after having been affected with measles in the Francis Joseph Hospital of Vienna, exhibited the following pathological alterations : The mucous membrane of the bronchia below the second ramification downwards, appeared puffed and thickened, discolored, and covered with croupous exudation ; all the bronchia were dilated. In both of the lungs were numerous lobular hepatisations, interspersed particularly near the surface of the lungs, with innumerable larger or smaller cavities filled with pus, communicating with the dilated bronchia, and surrounded by infiltrated pulmonary parenchyma. The bronchial glands were swelled and infiltrated with a yellow cheesy mass. Some tubercles were found dispersed in the spleen ; but no pathological alterations in any other organ. The reporter remarks, that in, and after measles, the blood always has a tendency to deposit croupous exudations on the mucous membranes of the mouth, pharynx, larynx, and even of the intestines. When the exudation is deposited on the larger bronchia, it gives rise to lobar pneumonia ; when on the smaller ones, it produces lobular pneumonia ; in either case, however, only, by transmitting the inflammatory process down to the lung-cells. He further states, that, differing from what is seen in and after typhoid fever and hooping-cough, the deposited exudation in pneumonia, following measles, has a great tendency to become purulent. Thus the diseased parts are very generally found in the condition of "gray hepatisation," either wholly or locally.

DR. ELLIOT publishes a case of undoubted measles, as far as the skin was concerned, the other symptoms, however, especially in the fauces, etc., resembling scarlatina. He thinks himself almost obliged to recognize a class of cases in which scarlatina and measles cannot be distinguished from each other.

PROF. WUNDERLICH has found, that the eruption of both morbilli and scarlatina are accompanied by a continued fever and increased temperature. The fever in measles reaches its maximum immediately before the defervescence, usually occurring on the fifth day of the disease, and followed by a rapid decrease of temperature. Complications only, both present and approaching ones, may modify the

regular course. Fever and temperature, in scarlatina, is usually higher than in measles, but in the former there is no increase before defervescence, nor is the decrease of temperature afterwards so very rapid.

DR. KUETTNER considers scarlatina and measles not so different from each other as Schönlein thought they were, when he counted morbilli amongst the catarrhal, and scarlatina amongst the erysipelatous families of diseases. He at first points out such cases, which show the exact symptoms of neither scarlatina nor morbilli, and are often described under the denomination of rubeola. Then he refers to some facts laid down in medical literature, the number of which he augments by a singular case observed by himself, proving that the same contagion produces either scarlatina or morbilli in different individuals. How this could be done, he does not venture to say; but it does not seem to be impossible for the organism to alter a contagium penetrating the whole system. A severe cold, for instance, produces rheumatism in one, catarrh in another individual.

DR. GELMO publishes the following facts, with the conclusions therefrom: 1. Particularly in the transition from one epidemic to another, eruptions are observed, which are neither scarlatinous, nor morbillous. 2. Such cases have been observed, sometimes in, as it were, epidemical frequency, but each time a distinctly characteristic epidemic, either scarlatina or morbilli, have been seen to follow. 3. A few single cases, being anomalies of any eruptive disease, do not entitle the assumption of a new species. 4. It must be acknowledged, that the authors writing on rubeola, have described roseola, scarlatina variegata, or the French rougeole (morbilli), amongst their cases. 5. French authors also, as for instance Rilliet and Barthez, state emphatically that some physicians used to describe, at once with scarlatina and morbilli, a third species, rubeola; but that they do not see any reason by which the assumption of its existence ought to, or could be supported. 6. Therefore, there is no reason why the name of rubeola is kept any longer.

Prof. HEBRA's clinical lecture on scarlatina and measles gives an exhausting exposition of the subject. His views on rubeola, as an independent eruption, are about the same as those of Dr. Gelmo; his therapeutical treatment is as simple and sceptic as possible. There is no cure for neither scarlatina nor measles; only where the diseases take an anomalous course, an appropriate treatment has to be employed according to the symptoms. Embrocations of lard he considers to be useless; in the catarrh dependent on measles, he administers Dover's powder, and applies cold to the throat in anginose scarlatina.

Dr. JAMES reports the case of a boy of 8 years of age, who, in less than two months, suffered from measles, urticaria, scarlatina, and purpura hæmorrhagica. In this latter the spirits of turpentine are reported to have proved remarkably useful.

Dr. SALTER has seen a number of cases in which necrosis and exfoliation of the alveolar processes of the maxillæ, accompanied by the shedding of the corresponding teeth, has been one of the secondary consequences resulting from the attacks of the eruptive fevers—

scarlet fever, measles, and smallpox. The immediate generic cause of this anomaly appears to be common to the several forms of eruptive fever, the rational interpretation of which fact may be found in the following propositions of Salter's, viz.: 1. Certain diseased conditions of teeth are sufficient to produce their own shedding, by the necrosis and exfoliation of their containing alveoli. 2. In the eruptive fevers the poison of the disease spends its chief force upon the tegumentary system. 3. The teeth are modified papillæ—are members of the tegumentary system. The severity of the previous attack of fever seems to have no relation to the subsequent exfoliation; it occurs generally at about 5 or 6 years of age, at a period where the most active tooth development is going on in the jaw. From 4 to 8 years are the extremest limits noticed. The temporary molar or molars, and the corresponding bicuspid or bicuspids, with their containing alveoli or loculi, have always been the parts to suffer. The patients have generally been girls, and of the poor class.

Dr. PAASCH, while reminding of the fact, that exanthematic fevers accidentally appearing in patients suffering from inflammatory diseases, as for instance in the respiratory organs, are a very dangerous complication, states and proves by facts, that an often dangerous complication is formed by accidental coincidence of a traumatic insult and an acute exanthem.

Dr. GALLWEY reports the following cases of complication of different exantheas: A consumptive soldier suffered from a severe attack of measles. When the disease was at its height, confluent smallpox developed itself, in the course of which the patient died. Another soldier, twenty years old, was in the third day of malignant anginose scarlatina, when confluent variola made its appearance, effecting, after two days' suffering, the death of the patient.

Dr. GINTRAC arrived, by means of facts elucidated by a large number of quotations, at the following conclusions on the coincidence of variola and vaccina: Where variola sprung up, after vaccina had begun its course, vaccine has been either completely kept back or interrupted even as long as the course of variola lasted, or has taken a slower development. Thus there is a decided influence of variola on the invasion and development of vaccina; there is also an influence on the form of the pustules, which may undergo great modifications, viz.: 1. A diminution, or even a complete absence of the variola. 2. A diminution or absence of the subjacent induration and tumefaction. 3. An imperfect development of the pustules as to color, and size. 4. In some cases a suppuration analogous to the one in discrete variola. Notwithstanding such modifications, the fluid contained in the pustules was apt to transmit the contagion. Vaccine, too, may modify variola, the more so the nearer it is to its regular termination. 1. Inoculation of variola, performed after the ninth or eleventh day of vaccination, is not successful. If performed on the fourth, fifth, or seventh day, it sometimes produces pustules, which do not contain, however, fluid matter, and are prone to desiccate on the seventh or even fifth day. 2. James Boyce observed, that the pustules of variola, inoculated after vaccination, are very much like vaccine pustules. 3. Variola occurring after vaccination



always took a mild course, even when in the neighborhood or the same house, there was confluent variola. 4. Cases of variola have been observed to begin with a high fever and dangerous general symptoms, which diminished as soon as vaccine began its course. 5. Variola, after vaccination, has no secondary fever, no swelling of the face, no ptyalism. 6. Its duration has been brought down to eight, six, five, even four, days.

Dr. RIECKE considers varioloid to be nothing else than variola modified by the preoccurrence of vaccinia; further he adds, that when variola itself is no perfect safeguard from the attack of varioloid, we cannot expect vaccinia to be more; that a susceptibility to infection may be reëquired, and that all the more speedily, the earlier in life vaccination has taken place. Some children cannot be vaccinated at one time, but may, after a varying period, acquire the susceptibility. Dr. Riecke asserts that he has frequently seen the lymph from imperfect vaccinia vesicles, formed in cases of revaccination and running their course in from three to six days, produce regular vesicles in those not previously affected. Causé thinks that the undeniably more frequent occurrence of variolous epidemics in recent times, depends partly on the loss of power in the lymph, which, in his experience, has ceased to produce an areola or secondary fever, but only a purely local disease, partly on the too early period of life at which vaccination is generally performed, partly, also, on the want of proper supervision, by which many children are allowed to be registered as fully protected after passing through only a vaccinia spuria. Nevertheless, it is certain that vaccination affords no absolute, but only a temporary protection, which may be reckoned at an average of ten or twelve years for most. To improve the quality of the lymph, attempts have been made to vaccinate cows with human lymph, but large experience in Sweden has proved this proceeding to be more than useless. Inoculating cows with variola lymph, has reproduced only variola somewhat milder than usual. The use of the true vaccinia lymph is, according to Dr. Friedinger (*Prag. Viert.*, 1857, *III.*), uncertain in its primary transfer, but gains in certainty by wider extension from man to man. In the Prussian army, in 1854, 66,341 individuals were revaccinated; 50,956 of them had distinct scars of earlier vaccination, 9,860 indistinct ones, and 5,525 none whatever. Of the whole number, 54,302 were properly affected by the vaccination, showing clearly the importance of its performance.

Dr. CAUSE, although formerly inclined to consider variola and varioloid as distinct diseases, now regards them as the same, varying only in intensity. He considers it important—

1. To vaccinate direct from the cow.
2. To use fresh lymph.
3. To choose legitimate vesicles from healthy children, of not too tender an age, and to take the lymph about the seventh or eighth day, before suppuration sets in.
4. Never to vaccinate before the child is at least six months old, except when variola is epidemic.
5. Never to break all the vesicles.
6. Where the least doubt about the regularity of the disease, or where too few vesicles are formed, to revaccinate at once.
7. To make revaccination compulsory about the twelfth



year. 8. Where this takes, to compel a third vaccination after a proper interval.

Dr. BERTILLON concludes from statistical investigations, that : 1. The mortality rates of every age is lower in the 19th century, than ever before. 2. In the age of from 20 to 30 years, which is most suspected by the detractors of vaccination, 14 per cent. died in the last century, 11 in this one. 3. It is not proven that typhus has increased in number ; quite the contrary ; and the transformation of variola into typhus is an unfounded assumption. 4. The increasing rate of mortality, in the male sex, in France, cannot be traced to variola. 5. These and other charges against vaccination depend on either fictitious facts or syllogisms.

An editorial in the London *Lancet* again urges the necessity to be cautious in the selection of lymph, to be watchful in regard to the state of the health of the child to be operated on, and attentive to the local affection induced by the vaccination.

Dr. LALAGADE arrives at the conclusion, that microscopical and chemical examinations show the identity of vaccine virus of a first vaccination, and revaccination ; that the virus taken after each shows the same effects, local as well as general, on the system of children or adults ; and that direct experience in epidemics give certainty to the opinion, that the virus of revaccinations is as efficient as that of first vaccinations.

Both Dr. GRUENDER's and Mr. HOCHSTETTER's pamphlets on vaccination, are written for the use of the public. The first named author is a plain, educated, scientific writer, well acquainted with the literature on the subject, and therefore follows the views of the medical profession on vaccination, its usefulness and importance. Mr. Hochstetter, however, feels bound to express his utmost satisfaction, firstly, on his and his seven children's surviving the operation of vaccination ; secondly, on the number of anti-vaccination papers printed in the English Parliament's *Blue Book*, from which he quotes largely. His feelings are expressed in that well-known prolix and oily manner, which is the attribute of his business ; which is that of a clergyman.

Dr. BECA chooses to vaccinate by means of magnetized needles. From mere politeness we report his belief that, 1. Vaccination by means of magnetized needles has no difficulty at all ; 2. of 1200 vaccinations, only 12 were unsuccessful ; 3. vaccine virus adheres better to magnetized needles ; and 4. children are less troublesome during the operation.

Dr. COSTE vaccinated himself on his arm every year, without success ; but once the virus accidentally took on his nose. Therefrom, he explains the fact, that shortly revaccinated persons, whom the virus did not effect, may fall sick, soon after, with variola ; and concludes the necessity of revaccinating on different parts of the body in order to obtain surety.

A new instrument for vaccination is the invention of Mr. BORHAM, London. It is a small instrument, convex above and concave below, so as to adapt itself to the configuration of the child's arm, where, by pressing it, a ridge of skin is formed, into which the lancets can be made to penetrate by means of a cogwheel. There are sets of

lancets which are grooved at the points, so as to retain the virus more completely.

Dr. WALLMAN reports the following case of variola in a new-born child: A female child (premature) was born, on the 25th of Feb., 1857, with variola vera, forty-six pustules being found when the child died, thirty hours after birth. The mother was a healthy primipara, 28 years of age. While in the hospital, she was for a short time in a room with patients affected with variola; two pustules of variola made their appearance on her, while she was under the endemic influence. Eight days after her having wholly recovered, she was sent to the lying-in hospital, where she was confined. She remained in good health afterwards.

A case similar to this, has been under the observation of Prof. Hebra. The mother was confined while suffering from variola. The child affected with pustules of variola in different stages of development, was stillborn.

Dr. JACOBI publishes a similar case, which occurred in the practice of Dr. Michaelis, of New York. A primipara gave birth on the 12th of May to a male child, who lived only a few moments and was covered with variola, most extensively so on his face and thorax. There was nothing abnormal about the confinement, except an uncommon painfulness of the back. The pustules of variola appeared to be in the sixth or seventh day of their development. The mother was not, nor had she been during her pregnancy, suffering from variola or varioloid, or, as far as could be learned, from varicella, but there is one interesting characteristic fact in the history of her pregnancy. When in her fourth month, she was present at the death of a child, who died from variola. For full four weeks she felt exceedingly sick, suffering from repeated chills, and was continually afterwards afraid of having variola. Her puerperium took a favorable course.

Dr. KÆRTE has observed a fœtus of seven months who was dead for some time, and whose mother had been affected with a slight attack of varioloid. Upon the entire cutaneous surface of the fœtus, there were isolated, yellow resistant spots of a round form, which being situated in the corium, must be attributed to a local infiltration without having ever reached the stage of suppuration. Perhaps the premature death of the child has kept the development of the pustules back; but the uninterrupted influence of the amniotic liquor may have modified, in this case, the local development of the contagious deposits.

Dr. BAILEY reports a case of erysipelas neonatorum, in a child of six weeks of age, terminating successfully. The treatment consisted principally of Dover's powder and sulph. chin.

Prof. LEBERT reports the case of a boy of six years, who died, after having been sick with erysipelas for three weeks, from exhaustion, and with the symptoms of broncho-pneumonia. The post-mortem examination resulted in finding this, and, without an abscess existing, purulent infiltration of the cellular tissue between periosteum and glabella. The cellular tissue round the parotis was red, serous, and nowhere purulent.

Dr. LEGROUX reports two cases of sclerema neonatorum, which was

speedily removed, in the course of some days, by frequent kneading of the body ("massage"), passive motions of the muscles and artificial respiration.

DR. HAUNER has never seen bad results of the removal of chronic exanthems, provided they were not treated with exsiccating applications, such as lead water.

After the crusts of eczematous and impetiginous eruptions have been removed by water, according to Garot, DR. GIBERT applies a mixture of 30 parts of glycerine, 2 of depurated tar, and 15 of starch. It will lessen the pruritus, dry the sore cutis, remove the smell, and generally operate as an astringent and resolvent at once. He used the same mixture in intertrigo, pruritus of the scrotum and anus, acne rosacea, and subinflammatory mentagra. In other cases of prurient, eczematous, and other eruptions, he successfully used a mixture of two parts of cod liver oil, and one part of oleum cadinum, cold hip-baths, and arsenic internally.

MR. STARTIN, in eczema of the scalp and face in children, gave iodide of potassium internally, and ordered the surface to be washed with the yolk of an egg and water, and smeared with the nitric oxide of mercury ointment (Olive oil ℥ii, lard ℥ii, powdered nitric oxide of mercury ℥i, oil of bitter almonds ℥ss., glycerine ℥i).

In cases of tinea, DR. MULAGO applies, by means of a brush, to the sore places, a hot paste composed of sulphite of lime, and recently slacked lime; it ought to be washed off after six or eight minutes.

DR. HAUNER has succeeded in curing pigmentous nævi as well as vascular ones by vaccination and revaccination.

MR. COOPER reports the case of three microphthalmic children of one family, all of whom show some peculiar particulars. Indeed, in every case of double microphthalmos which has fallen under Cooper's notice, there has been imperfect dental development; the same holds good in numerous cases of congenital cataract. The teeth are small, jagged, discolored, and soon decay. The cause which impedes the due development of the globe of the eye, or of the crystalline lens alone, influences the growth of the teeth. Furthermore, many of these children are stunted in stature, bow-legged, or knock-kneed, of wayward irritable temper, and not unfrequently obtuse in intellect.

MR. FRANCE gives the following report on double pupils in both eyes: A boy of three years of age, well developed, with normal eyes at and after birth, who had suffered from a variolous eruption in the first month of his life, had a normal pupil in either of his eyes, but, besides, apertures in the ciliar margin of the iris; in the right eye in the exterior and inferior, in the left in the interior and inferior margin. Posterior synechia was present in both of them. There was reaction on neither light nor atropia. The sight was good. On the right side, the child instinctively covered the abnormal opening, by drawing up the inferior eye-lid; this being impossible on the left side, the sight was troubled sometimes by the light falling in laterally.

DR. SAMSON's pamphlet is well written, and contains fourteen chapters with general remarks and special expositions on congenital diseases of the eye; on purulent ophthalmia; on catarrhal and pus-

tulous conjunctivitis ; on blepharitis and keratitis ; on pannus, strabismus, myopia, asthenopia, and amaurosis. From among the statements of the author, we select the following : A quarter of all the cases of blindness met with in adults, are the effects of ocular diseases contracted in early life, particularly of purulent ophthalmia. Some cases are congenital, as *congenital cataract*, in which the sensibility of the retina is sometimes kept intact for life, sometimes diminished in a short time. Thus the question arises, when congenital cataract must be operated upon. Dr. Samson follows the examples of MacKenzie, Rognetta, Ansieux, and Siehel, who operate either in the first months of life, or after dentition is fully finished. *Purulent ophthalmia* is a very common disease among young children ; being mostly found in new-born infants, and scarcely ever after the fourth or fifth year of life has been accomplished. This predisposition of early infancy must not be sought in special poisonous principles of the atmosphere, nor in a peculiar sudden inoculation during birth, but rather in the anatomical and physiological development of the infantile eye. In new-born infants the cornea is thicker, the aqueous humor less limpid, but soft and voluminous, eyelids thin and transparent, and receive more serous matter from the blood-vessels ; Meibohm's glands have an exaggerated development, subconjunctival cellular tissue is abundant and loose, and its blood-vessels very little compressed. Of the local astringents recommended in purulent ophthalmia, Dr. S. gives the preference to borax dissolved in 400 parts of water. *Catarrhal conjunctivitis* is only palpebral in the majority of cases, the bulbus seldom showing signs of inflammation, especially no phlegmonous chemosis. *Pustular conjunctivitis*, *blepharitis*, and *keratitis*, have been called, before Trousseau and Desmarres, by the collective name of scrofulous ophthalmia ; our author naturally prefers the exact anatomical and pathological nomenclature of the above-mentioned writers. The pustules commence their development in the small glands of the conjunctiva, like aphthæ on the mucous membrane of the mouth, particularly in the inner angle of the eye, as it contains a greater number of vessels. Blepharitis may consist of either inflammation of the roots of the cilia, or of Meibohm's glands, or it may be mucous, or granular. *Spots on the cornea* are usually found in or near the centre ; marginal ulcers leave no spots from their being in the neighborhood of resorbing blood-vessels. *Lusitas* is but a variety of *strabismus*, and complete immobility, pronounced pathognomonic in *lusitas* by Beer and Mackenzie, need not be present. Surely there are different stages and degrees. Strabismus will degenerate into *lusitas*, by paralysis of the third or sixth pair, from cerebral affections, traumatic lesions of the ocular muscles or their nerves, adhesions, tumors in the orbits, and congenital absence of a m. rectus. In the *asthenopia* (want of the accommodating faculty of the eye) of onanists, the pupil is said to lose its normal situation, turning inwards and upwards. Amaurosis in infancy is reported to follow on dentition, worms in the intestinal canal, suppression of eczematous and impetiginous eruptions, acute exanthems, and—lice.

DR. RICHTER asserts that Prof. Arlt never loses an eye from blen-

norrhœa of newborn children when timely observed, with the following treatment: After the secretions are removed by injections of luke warm water, ungt. hydrarg ciner 3. ii, and extr. hyosc. is rubbed on the forehead, and after some days have elapsed, a solution of 1 or 2 grains of nitrate of silver in an ounce of water is applied 3 or 4 times a day. Scrofulous conjunctivitis requires, in photophobia, merc. præcip. alb. gr. viii, extr. bellad. gr. xii-xvi, fat 3. ii, to be rubbed on the forehead from 4 to 5 times a day. At the same time con. mac. gr. i, or conium gr.  $\frac{1}{8}$  to be taken internally. Local applications of calomel, wherever there is no ulceration of the cornea and purulent decomposition of the exudation, dissolves the exudation rapidly. Ulcers of the cornea require one or two daily applications of a solution of a grain of sulph. atrop., in 2 drachms of water; thus the pupil is dilated, the iris secured, circulation in the internal eye becomes free. The internus muscle is paralyzed, perhaps the recti and obliqui also. The cure is supported by laudanum. In thickening of the eye-lid the tincture of iodine was used externally.

DR. FOVILLE, in simple conjunctivitis of new-born children, orders cold lotions of the eyes and instillations of weak solutions of nitrate of silver, to be administered three or four times a day. Whenever the disease is severe, the old mucous membrane must be destroyed after the eye has been well cleansed by pouring on and injecting cold water. A solution of one part of nitrate of silver to four parts of water must be applied three times a day.

DR. MACMILLAN recommends, in ophthalmia of new-born children, the application, 3 times a day, of 5 grains of chloride of zinc well triturated in a glass mortar with half an ounce of glycerine, and frequent ablutions of the eyes, and application of pure glycerine. It would appear that the use of glycerine alone has a beneficial effect as a lubricant, and at the same time diluting the purulent-discharge, and consequently diminishing its irritating effects on the adjacent parts.

PROF. ARLT, fond though he be of the applications of solid nitrate of silver to the inflamed and suppurating eye-lids, rejects its use wherever the patient cannot be regularly attended to, or the parents cannot be depended upon. The indications result from the state of the conjunctiva, which when exhibiting an infiltrated exudation, thickened throughout, must not be touched with the caustic, while it is indicated in swellings of the conjunctiva produced by accumulation of blood and serum. In the former case, Prof. Arlt begins the cure with ablutions and embrocations of mercury salve with some narcotic extract, until the swollen parts of the conjunctiva, or the whole conjunctiva have become accessible to the caustic. He has sometimes been obliged to stop the application of the nitrate of silver either for the given reason, or for an exacerbation of the symptoms produced either by too continued and deep cauterization, or by the negligence of the nurse, infection of the air for want of ventilation, uncleanness of the eyes, or deficient application of the cold fomentations.

DR. MAGNE read a paper before the Académie des Sciences, of Paris, of which the following points are the main contents: 1. The

diphtheritis of the conjunctiva is of a nature similar to croup. 2. Its symptoms forbid to confound this disease with the one called pseudo-membranous ophthalmia. 3. It is especially seen in children. 4. It does not appear to be merely local, but is dependent on, and connected with a constitutional alteration; exutories, when applied, are apt to constitute a complication. 5. It does not appear to be contagious, only one eye having been affected in the four cases successfully treated by the author. 6. It is a grave and rare affection but accessible to cure. The same author publishes 4 cases of diphtheritic conjunctivitis; in one of them the child appeared to be perfectly healthy when taken out into fresh air; returning after two hours it had diphtheritic membranes on the conjunctivæ. Magne considers this affection to be a part only of a general affection of the organism, the skin deprived of its epidermis by a vesicatory exhibiting diphtheritic membranes, which took two months to heal and not without producing a cicatrice similar to those produced by combustion of the cutis.

PROF. DEVAL relates the case of a boy of ten years of age suffering from hemeralopia, without any manifest cause. No rational indication being present, Deval tried a remedy much recommended by Dupont, and much used amongst the people; he exposed the eyes twice a day, for ten or fifteen minutes each time, to the evaporations of a boiling cow liver. The child got well in a few days (*Dupont mém. sur la goutte seréine nocturne épidémique*). The same remedy is much used by the Chinese (*Dictionnaire de l'Industrie*, Paris, 1795, tom. iv.)

Dr. HUTCHINSON endeavors to give a detailed account of acute iritis occasionally met with in syphilitic infants. In his opinion it is frequently a consequence of hereditary syphilis, and sometimes occurs at periods subsequent to infancy; further, the form of kerato-iritis met with in young persons and formerly known as "agus-capsulitis," and the disease known as "chronic corneitis," "interstitial corneitis," "strumous corneitis," are in the majority of cases a direct result of inherited syphilis. Finally some of the cases of deposit in or upon the retina or choroid, hitherto classed as "scrofulous," and certain cases of tinea tarsi, fistula lachrymalis, and other affections of the ocular appendages occurring in children are asserted to be of syphilitic origin.

Prof. MEYER describes the auditory organs of a deaf-mute, which were completely and perfectly developed; only the cerebral ventricles showed the residues of internal meningitis, there being thickenings partly plain, partly in small knots. Such a thickening was also found on the lower wall of the rhomboid fossa, and covered the striæ auditivæ entirely. Thus the origin of the auditory nerve was destroyed by internal meningitis, which is not a rare disease, but leads to hydrocephalus in the majority of cases. It has been also observed in later life. Physiologically, the normality of the auditory nerve is of great interest; its normal structure depending more on external irritations and irritability than on its functional juncture with the brain.

Prof. HELIE expresses his opinion, that the difficulty of dissecting

the auditory organs has often given rise to the belief of congenital deafness and dumbness being mostly a functional lesion of the nervous system. He points to Ménier, Triquet, and Michel as having published observations of cases, where the defaults of conformation were found in the internal ear; and goes on to describe a case observed by himself, in which the external and middle ear of either side were well formed and fully developed. But on the right side there was no internal ear at all, with the exception of a short canal appearing to be a rudiment of the vertical and inferior semicircular canal, and opening with its one end at the extremity of the petrous part, with its other in a cul-de-sac, without being in any connexion with either the middle ear or the auditory nerve. The petrous part was normal. On the left side there was no internal ear except the cavity of the vestibulum, which was filled with a white and soft mass of nervous tissue receiving the terminations of the vestibular divisions of the auditory nerves. The auditory nerves were reduced to two-thirds of their normal volume, the anterior root appearing to be normal, the posterior was grayish and gelatinous, and without the characteristics of nervous tissue. The other nerves and the brain proved entirely normal.

In another case of Prof. Hélie the superior vertical canal was absent, the horizontal canal was very small, only the inferior being normal. The other parts of the auditory organ were normal, only, perhaps, somewhat small throughout. The auditory nerves originated from a single gray root, the posterior being entirely absent.

The majority of cases of otorrhœa consist of an inflammation of the meatus auditorius externus producing a more copious secretion. Children suffering from this disease are frequently affected with diseases of the glands and laboring under general debility. Sometimes it originates after scarlatina, measles or cold; traumatic causes can seldom be found. Deafness never is the result of simple otorrhœa, but is in such cases dependent upon tympanitis. There are cases also where otorrhœa is but a symptom of an irritation existing in the middle ear. Polypi of the ear are often found in company with otorrhœa, and will frequently give rise to bleeding. The secretion must be removed, and the ear kept clean by injections of warm water, followed by astringents. Where there is much pain, one or two leeches, and warm fomentations, will be useful; obstinate cases require counterirritants on the mastoid process and injections of a strong solution (gr. X—XL to an ounce of water) of nitrate of silver, to be applied every third day. The general health must always be taken care of.

In Dr. TURNBULL's opinion, as in that of the average of writers on the subject, otorrhœa resulting from scarlet fever is a disease which, if it becomes purulent and chronic, is very difficult to cure. Acute inflammation requires local depletion, suppuration in the tympanum, slight incision in the abscess, anæmia tonics, chronic inflammations counterirritants and weak astringent washes.



## VIII. URO-GENITAL ORGANS.

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*Right Ovary, Weighing Ten Ounces and a Half, Occurring in an Infant Nine Months Old.*—Lancet. July.

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PROF. BARKOW'S work belongs to the number of books which will undoubtedly secure the author the reputation of the most accurate anatomist of the urinary bladder. This organ had been somewhat neglected as to the measures, size, form, and position in different sexes, and ages, and Prof. B. at last has filled the want that evidently existed. The book is exclusively anatomical.

DR. SENTLEBEN states that malformations of the anus are usually complicated with others. By this fact he explains the large rate of mortality in infants, on whom operations for imperforate anus are performed. He reports two cases, in which the kidneys were much hypertrophied, and the ureters very narrow. This condition of the ureters is a retardation of development, the ureters, being solid in their first formation.

DR. CHEVANCE reports the case of a woman who could not be delivered except by eventration of the foetus, although she was not progressed to the normal term of pregnancy. The cause was found to consist in a hypertrophy of the kidneys, weighing 250 drachms, while the rest of the body weighed 612 drachms.

In a male infant, who died of pneumonia at the age of 3 months, and who never before had been sick, Dr. ISAACS found, in the left side, neither kidney nor ureter, nor a sign of the orifice of the ureter in the bladder. The left supra-renal capsule was about the same size as the corresponding one on the right side. The right kidney, being  $2\frac{3}{4}$  inches in length,  $1\frac{3}{4}$  inches in its transverse diameter, and  $1\frac{1}{4}$  in thickness, and the ureters were about twice their natural size.

DR. HUTCHINSON showed, before the Pathological Society, of London, diseased supra-renal capsules, which, besides the mesenteric glands, were the only parts diseased in a boy with bronze skin, who died at the age of eleven. Both renal bodies were entirely disorganized, containing chalk, cheesy matter, and firm fibrous tissue, binding together these elements. No trace of their normal tissue was discoverable.

Congenital extroversion of the bladder usually occurs in male infants, combined, in the majority of cases, with fissure of the urethra on the dorsal surface of the penis. MR. CURLING publishes a case of this malformation occurring in a female infant. There was a defect of the symphysis pubis, and an absence of the anterior commissure of the labia and clitoris. An opening was present in what appeared to be the mucous membrane of the anterior wall of the vagina, which might be either the meatus urinarius, or the entrance of the uterus. Two smaller openings were present, one on either side of this, which might be either the seminal ducts, or else the fallopian tubes. A slight prominence on either side of the supposed vagina represented, to some extent, the nymphæ. There was no scrotum nor testes.

DR. COOPER FOSTER operated upon 9 young children for stone; in 2

of these cases, he could distinctly trace the symptoms of stone from birth.

A child twenty-one months of age had been subject to stone no doubt for some time ; possibly it was born with it. Its pelvis was in a deformed state from rickets, with a considerable flattening from before backwards, so that the pubis approached the promontory of the sacrum ; the bladder was thus not only high up, but difficult to reach with the finger. The stone was extracted by MR. ERICHSEN, and was of an oblong figure, nearly an inch in length, and proportionately thick. The case progressed favorably after the operation.

Of 135 cases of stone in the bladder, treated by PROF. BALASSA, twenty-one occurred in persons under 7 years ; thirty-two from 8 to 15 years. Besides, forty-nine children have been treated for the same disease in the children's hospital of Pesth, during the year 1843-1855. Children in early life and with coarse diet are most subject to stone ; this fact PROF. BALASSA explains by inadequate food, children, after having been weaned, being nourished with herbs, potatoes, etc., which contains a large quantity of carbon. Thus, carbon forms the principal part of urinary calculi in Hungary. The majority of BALASSA's consisted of oxalic salts. Of twenty stones having a nucleus differing from the mass, the nucleus was of oxalates in twelve, of uric matter in eight, wherefrom the conclusion may be drawn, that oxalates and urates give the impulse to the formation of stone, phosphates only increasing its bulk. The sound produced by the probe is of some diagnostic importance ; the sound being sharper with oxalic stones, which are harder ; duller with phosphoric stones, which are less hard and dense.

DR. GEINITZ publishes 28 cases of lithiasis, 19 of which occurred in individuals of 15 years and under. All of them, with the single exception of a girl of  $2\frac{1}{2}$  years, were males. In two, the high section was performed ; both of them died, one 5 days, the other one day, after the operation ; for six the lateral section was performed, and all of them were restored to perfect health ; the youngest amongst them was a boy of 4 years 6 months of age. The stones weighed from 8 grains to  $2\frac{1}{2}$  ounces, which was the weight of a stone removed from the bladder of a boy of 13 years. In another boy of 13 years, some stones were found adherent to the inner surface of the bladder, in a number of patients suffering from dysuria, calculi were eliminated spontaneously, so as to make it difficult to decide whether these calculi were originally in the kidneys or bladder. Calculi of the kidneys were found in a boy of 32 weeks, who died of acute tuberculosis, in a boy of three months who died of the same disease, and in a boy of 23 weeks who had died of atrophy. The author is of the opinion, finally, that many cases of dysuria in children commonly referred to dentition, depend on and are referable to lithiasis.

MR. FOSTER removed a calculus the size of a horse-bean from the bladder of a child of five years, in 25 seconds.

Two cases of stone in the bladder of female children, each five years and a half old, came under the care of MR. HILLMAN. In the first case, a conical sponge tent was introduced into the whole length of the urethra, and retained for five hours, for the purpose of slowly

dilating that canal. Chloroform having been administered, the stone was withdrawn, after an incision had been made in the direction directly upwards towards the symphysis pubis, because of the size of the stone. This was of an ovoid form, measuring fully three inches in its longest, and two inches and three-quarters in its shortest circumference. It consisted of laminated urate of ammonia. Twenty-five days after the operation, the child was discharged, perfectly free from all suffering. In the second case, chloroform having been administered, a small, three-branched urethra-dilator was introduced, and the canal thereby dilated in the course of five minutes sufficiently to allow of the introduction of a pair of slender, straight lithotomy forceps into the bladder. No incision was necessary. The stone was of an ovoid form, thickly studded externally with small, sharp prominences. It measured rather more than two inches in its longest circumference, and nearly one inch and three-quarters in its shortest circumference; it was composed of oxalate of lime. The child was discharged thirty-four days after the operation.

Of the twenty-eight cases operated upon by DR. SPENCER, sixteen occurred in boys of from four to eleven years of age. All of them were discharged cured; in every one of them the lithotome caché of Dupuytren was used.

MR. MITCHELL HENRY exhibited, before the Pathological Society of London, a calculus of three ounces and three quarters, the nucleus of which consisted of pure lithic acid, which had been removed from the bladder of a boy fourteen years of age. It had been adherent to the upper part of the bladder, by means of a distinct pedicle or stalk. The surface of the stone was covered with an organized substance, which caused the adhesion.

DR. LOTZBECK advocates the high operation for stone, the fear of urinary infiltration having been exaggerated according to Günther's statistics, and the employment of the suture of the bladder, as successfully used by Bruns, although opposed by Bardeleben, Pitha, and others, upon mere theoretical reasonings. He then reports the case of a successful operation performed on a child eleven years old.

DR. NOEGGERATH performed the high operation for stone on a boy of eight years of age. The calculus measured two and one-half inches in length, and four inches in circumference, and weighed a little less than two ounces. It consisted of three different concentric sections, of which the nucleus was urate of ammonia, the next surrounding layer was composed of carbonate and phosphate of lime, and the outer layer consisted of phosphate of lime, double phosphate of ammonia and magnesia, animal matter, and carbonate of lime. Dr. Noeggerath directs attention to one particular feature of the case, viz.: the stone was not found for a long time, and by eminent surgeons, too, *because* it filled the whole of the bladder, and the instrument always passed around it without producing a sound. Finally, he reports the experiments made for the purpose of dissolving stones by injections into the bladder; the formula he used was as follows: Rp. Plumb. acetat. gr. vi., aq. comm. ℥vi., adde ac. acet. fort. q. s. ad solut. perf. D. S., one small syringe full, to be injected twice a

day. From his experiments, he concludes that a superacidulated solution of acetate of lead acts upon phosphatic stones as a decomposing, disintegrating, and solvent agent; the phosphoric acid previously combined with lime or ammonia uniting with the lead, the acetic acid of which goes over to a portion of the lime or ammonia, in exchange for phosphoric or carbonic acid, while the free acetic acid in the water renders a portion of the undecomposed phosphate of lime soluble. The particles of stone which were left unchanged in size and shape, had undergone such internal changes, that agitation in water sufficed to turn them into powder.

A girl of twelve years, who had passed a stone when three and one-half years old, was cured in Guy's hospital, by lithotripsy. Five operations were necessary, all of which were performed under the influence of chloroform.

MR. ERICHSEN cured a delicate girl of four years by lithotripsy, another of three and one-half years by dilatation, and a third one, of two and one-half years, by crushing the stone in the bladder.

DR. SLADE reports the case of a boy with two stones in the bladder, consisting of phosphate of lime. The patient died of some inflammatory disease of the lung a week after the operation of lithotripsy was successfully performed on one of the stones. There was no cause of death in the bladder, or the adjoining organs.

MR. SIMON has treated successfully some cases of incontinence of urine in children with galvanism, the current being passed along a catheter which had been previously introduced into the bladder. The cases were such of simple atony, and not those arising from irritable bladder.

MR. POLLOCK publishes two cases of incontinence of urine and their cure by belladonna; one in a boy of ten years, who had suffered for a long time without any visible cause; the other in a patient who had been submitted before to the operation of lithotomy.

DR. ADDINELL HEWSON observed seventy-eight cases of enuresis among the 292 boys in the House of Refuge of Philadelphia, with a ratio of the diseased of 1 : 3.75; this ratio was in the white boys 1 : 7, in the black 1 : 2.7. The average of the number was 12½ years old; the youngest affected with the disease was seven years old, the oldest eighteen; the greatest number affected at any one age was nine; this was at the age of fourteen years. Of sixty-three cases, the urine was of normal color in 46, very pale in 17; it was acid in every one of them. The average specific gravity was 1018, amongst the whites 1016, amongst the blacks 1020. Lowest sp. gr. observed was 1010, highest 1027. The greatest number of any one specific gravity was 16; in these it was 1020. Uric acid was deposited in 31 specimens, urate of ammonia (Golding Bird) in 8, urate of soda in 1, Ammon. phosp. mag. in 1; there was no deposit in 22. The prepuce and penis were discolored, and the former much elongated as either from frequent pulling to relieve the itching of cystic irritation, or as from masturbation; in 46 cases 18 confessed to being guilty of masturbation; in 33, there was every reason to suspect them; in 12, there was no suspicion. Amount of drinking, and diet,

exerted a great influence ; a sudden fall of the thermometer, or barometer, always increased the number of patients.

Bromide of Potassium, in  $2\frac{1}{2}$  and 3 gr. doses, thrice daily, was tried for its anaphrodisiac effect. Nine cases were completely cured after the first week of administration, four were benefited after another week. The remaining fifty exhibited no effect whatever. Chloride of iron was given, for six weeks, to the uncured fifty-four. No effect whatever. Tincture of cantharides was tried for two weeks ; strangury was effected in the majority of the patients, but no cure.

Belladonna was next given, "five drops of Squire's juice, prepared by Bently's process," with regard to constipation and worms. During two nights, at the end of the first week, there was not a single case. Among the eighty girls of the institution, there were only two who wetted their beds, and these suffered in a slight degree only.

In MR. FORSTERS' opinion, every case of retention of urine in children, although small quantities may still be excreted, is of very serious nature, infiltration in the perineum being easily effected, and producing gangrene and death, in the large majority of cases. A frequent cause of this disease are, from the second to the seventh year, calculi, especially in the urethra. Of five cases reported by Mr. Forster, only two did not result fatally, the stones being soon removed ; in the three others, the stones came away through the incisions made into the perineum. Death ensued after a few days.

DR. BIERBAUM has written on nephritis albuminosa, diabetes, diuresis, anuria s. urodialysis, nocturnal enuresis, dysuria, stranguria and ischuria, traumatic retention of urine, paralysis of the bladder, vulvovaginitis, trichoma of the hair of the mons veneris, gangræna vulvæ, loss of blood from the sexual organs, balanitis, posthitis and urethritis, ectopia of the testicles, and hydrocele. As we have proposed to note everything new in pædiatric literature, we do not feel inclined to spend our space, and to take our reader's time with merely extracting several chapters, that would find a better place in a manual than in a journal. Whenever a subject is to be exhausted in a manner like Dr. B.'s, it ought not to find a place in a journal ; in a journal, we look for something else beside what may be found in every manual on diseases of children. Without detracting anything from the value of Dr. B.'s essays, we wish simply to say, that whatever an old gentleman knows, he must not necessarily have discovered himself ; and that young man for whom Dr. B. asserts, on almost every page, to have written, may possibly know something without having learned from Dr. B., from merely making use of the same sources of instruction, to which the learned aspect of Dr. B.'s little essays is due.

DR. GODARD communicates in his inaugural dissertation a number of interesting cases of congenital absence of one or both of the testicles, with a review on many instances of the same deficiency collected from literature.

DR. PECH publishes the case of a man with absence of the posterior inferior angle of the parietal bone, who was obliged, therefore, to wear a metal plate. He had an intestinal hernia when a boy, and

when examined by Dr. PECH an omental hernia cohering with the spermatical funis and testicle which were entirely atrophical.

The same author reports the case of an alleged female, who was 21 years old in 1830. This hermaphrodite was then recognized to be a male, and died in 1857. The hermaphroditism was but external. The scrotum was split, the membrum virile imperforate in consequence of a retardation in the development of the urethra, the original foetal sinus urogenitalis persisting.

Dr. KÖLTSCHE publishes two cases of premature menses in two German girls of 7 and 8 years. The sanguineous emission was feeble but regular, in periods of 4 weeks. The physical development in general was not in proportion to that of the sexual organs.

Dr. BROWN's case of encephaloid disease of the right ovary is unique, and greatly interesting for the seat of the tumor, the age of the patient, the rapidity with which the disease ran its course, and the absence of any symptom that could excite the suspicion that the disease was malignant in character.

Dr. PICARDAT's pamphlet treats, in different chapters, on complete or partial absence of the urethra, on its obliterations, on its abnormal openings (epispadias, hypospadias), on anomalies in its general form (dilatations and contractions), and on the twofold character of its canal. There is nothing original in this little work; but whoever wants to find a good collection of facts on congenital deformities of the urethra, from French authors, will feel satisfied with Mr. P.'s selection. We say from French authors, for, except Haller, Ruysch, Vesalius, and Borelli, whose latin works are occasionally quoted, Mr. P. appears never to have consulted any foreign authority.

Dr. GABY observed simple vulvitis particularly in syphilitic, anæmic, and feeble infants, with pale mucous membrane, otorrhœa, and intestinal catarrh. But sometimes robust children were affected. Local application, for 3 times, of nitr. bism. was sufficient to effect a cure.

Dr. VOGEL asserts that the majority of cases of purulent secretion of female genitals are not specific. Infection is produced by garments, sponges, sleeping in one bed with a diseased woman, immision of a diseased penis.

Dr. BROWNING's singular case of genito-urinary malformation, is a case of epispadias.

Dr. WERNER publishes a case of hypospadias, in a boy of eleven years of age, on whom Prof. Bruns operated unsuccessfully.

Dr. SCHULTZE reports a cystiform expansion of the right ovary by extravasated blood, in a still-born child of seven months. The tissue of the ovary was torn and broken, in some parts scarcely recognizable, by blood both fluid and coagulated, and fibrous coagulations.

Dr. JONES exhibited before the Pathological Society, of London, the clitoris of a child of 6 weeks, which was about an inch in length, and had a distinct glans and prepuce. The other sexual organs were well formed.

ROGERS was uniformly successful in treating the non-congenital phimosis of infants, depending upon an accumulation of the secretion



of the glandulae tysoni within the prepuce, by tepid injections, repeated 2 or 3 times a day.

PROF. STREUBEL, in a silly article full of ungentlemanly witticisms, contests against the necessity of circumcision in cases of congenital phimosis, declaring the elasticity of the prepuce to be so great as to allow of a high degree of expansibility, and asserting the generally well-known opinions of Ricord, Vidal de Cassis, Bonnafont, Chassaignac, and all good surgeons to be sheer nonsense.

DR. RÖBBELEN is of Streubel's opinion, because in one case of paraphimosis, when he, Röbbelen, was just about to split the prepuce, this was easily brought into its normal situation by a simple incision of the freculum. Si tacuisses—.

## IX.—MOTORY ORGANS.

1. Schwegel, *The Development of the Bones of the Trunk and Extremities, Viewed with Regard to Surgery, Obstetrics and Forensic Medicine.*—Sitzungsber. d. Kais. Akad. d. Wiss. XXX. 17. (Repr. Pamphl. Vienna. pp. 54.)
2. Böhm, *on the Forensic Importance of the Osseous Nucleus in the Inferior Epiphysis of the Femur in Newborn Infants.*—Casper's Viertelj. 1.
3. *Congenital Absence of the Radius and its Muscles.*—Lancet. Aug.
4. Johnson, A., *Case of Polydactylism in which Nine Toes existed in One Foot.*—Trans. Path. Soc. IX. p. 427.—Lancet. Aug.
5. Silvester, H. R., *A Contribution to the Science of Teratology.*—Lancet. Febr.
6. Wallmann, H., *Some More Remarks on the Singularly Formed Shoulder-Blades of a Child.*—Würtzb. Verhandl. VIII. 3. p. 323.
7. Honel, *on a Monstrous Fœtus.*—Gaz. Hebd. 37. Arch. Gén. Oct.
8. Adam, *Malformation of the Lower Extremities.*—Chic. Med. Jour. April.
9. Blasius, E., *Six Cases of Congenital Angular Curvature of the Leg.*—Monatschr. f. Geb. Aug.
10. Recklinghausen, F., *The Mineral Elements of Young Human Bones.*—Virch. Arch. XIII. 5, 6.
11. Müller, H., *Ueber die Entwicklung der Knochensubstanz nebst Bemerkungen über den Bau Rachitischer Knochen.*—Leipzig. pp. 89. (*On the Development of Osseous Substance with Remarks on the Structure of Rachitical Bones.*)
12. Bouvier, H., *Leçons Cliniques sur les Maladies Chroniques de l'Appareil Locomoteur, Professées à l'Hôpital des Enfants Malades Pendant les Années 1855, 1856, 1857.* Paris. pp. 512. (*Clinical Lectures on the Chronic Diseases of the Locomotive Apparatus, Delivered at the Hospital for Sick Children at Paris, in the years 1855, 1856, 1857.*)



13. Bouvier, H., *Atlas des Leçons Cliniques, etc. Déviations de la Colonne Vertébrale.* 20 Planches. (*Atlas of 20 Plates on Deviations of the Vertebral Column.*)
14. Bouvier, H., *State of Viscera in Scoliosis.*—Gaz. d. Hôp. 1.
15. Gontay, *Du Rachitis et du Rachitisme, ou mieux ostéomalaxie.*—Paris. Thèse. p. 29. (*On Rachitis and Rachitism, better osteomalaxia.*)
16. Bigg, H. H., *On the Mechanical Appliances Necessary for the Treatment of Deformities. Part I.* London. p. 236.
17. Fleming, *Die Rückgratsverkrümmungen, besonders für Eltern und Erzieher.* Dresden. pp. 84. (*The Curvatures of the Spine, for the Particular Use of Parents and Pedagogues.*)
18. Eulenburg, *Contributions to the Pathology and Therapeutics of Scoliosis with Particular Regard to Some Modern Theories.*—Prag. Viertelj. 2.
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20. Wedl, *on Rachitis.*—Zeitschr. d. Ges. d. Aerzte z. Wien. 2.
21. Küttner, *Statistics on the Prevalence of Rachitis at Dresden.*—Journ. f. Kinderk. 7, 8.
22. Hauner, *Report on the Eleventh Year of the Dispensary Connected with the Children's Hospital at Munich.*—Journ. f. Kinderk. 7, 8.
23. Budd, W., *Calcareous Salts in the Treatment of Rickets.*—Brit. Med. Jour. June. 7.
24. Routh, *A New Preparation of the Superphosphate of Iron and Lime.*
25. Little, W. J., *on Unnecessary Orthopædic Operations. Treatment of Non-Congenital Diseases.*—Lancet. Febr.
26. *Incipient Talipes Equinus, Consequent on Injury of the Spine.*—Lancet. July.
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28. *Scrofulous Disease of the Thumb and Lower Jaw.*—Lancet. Oct.
29. Johnson, S., *Necrosis of the Tibia, in a Child 28 Days Old.*—Trans. Path. Soc. p. 352.
30. Klose, C. W., *The Separation of the Epiphyses, a Disease of Development.*—Prag. Viertelj. 1.—Arch. Gén. Aug.
31. Gosselin, L., *on Inflammation of the Epiphyses, of Bones in Young Individuals.*—Arch. Gén. Nov.
32. Schuh, *on Reposition of the Luxation of the Femur in Coxalgia.*—Wien. Z. 6.
33. *Reduction of the Radius after Six Weeks.*—Lancet. May.
34. *Strumous Contracted Knee.*—Ibid. Aug.
35. Chalk, O., *Morbus Coxæ. Death from Encephalitis.*—Trans. Path. Soc. IX. p. 353.
36. Price, *Head of the Femur Removed by the Operation of Excision.*—Ibid. p. 349.

37. *Clinical Records*.—Lancet. Jan., Febr., June, July, Sept., Oct.
38. *A Mirror of the Practice of Medicine and Surgery in the Hospitals of London*.—Lancet. Oct.
39. Beale, J. S., *on a Case of Deficiency of Development of the Superior, Posterior, and Anterior Aspect of a Fœtus*.—Lancet. Nov.
40. Reiner, M., *Successful Disjunction of Two Children Connected with Each other between the Tub. Isch. and Os Cocc.*—Wien. Med. Woch. 31, 32, 34, 51.
41. Ravoth, *Observation of a Case of Congenital Luxation of the Patella forwards and upwards*.—Mon. f. Geb. May.
42. Lynch, *Contused Wound, in a Fœtus within the Uterus*.—Brit. Med. Jour. July. 24.
43. *Congenital Torticollis in a Young Girl*.—Lancet. Jan.
44. Nunn, T. W., *Congenital Deficiency of the Latissimus Dorsi*.—Trans. Path. Soc. Lond. IX. p. 427.
45. Gay, *Extirpation of a Peculiar Lipomatous Tumor on the Arm of an Infant, Recidive and Second Operation*.—Med. T. and Gaz. 25.
46. Birkett, J., *Congenital Supernumerary and Imperfectly Developed Auricles on the Sides of the Neck*.—Trans. Path. Soc. Lond. IX. p. 448.
47. Nunn, *Femur and Hip-Joint Taken from a Patient who had Been Affected with Talipes Equinus Paralyticus*.—Ibid. p. 432.
48. Ramskill, *Congenital Deficiency of Part of One of the Abdominal Muscles*.—Med. T. and Gaz. July, 3.
49. Steger, F. E. H., *Congenital Malformation*.—Nashv. Monthly Rec.
50. Roberts, W., *an Essay on Wasting Palsy (Couveilhier's Atrophy)* London. pp. 210.
51. Friedberg, H., *Pathologie und Therapie der Muskellähmung. Mit 4 Tafeln Abbildungen*.—Weimar. pp. 350. (*Pathology and Therapeutics of Muscular Paralysis. With 4 Plates.*)

DR. SCHWEGEL'S essay looks less like an original article, than like a number of extracts from a large work of many volumes. We have never seen a larger number of important facts and discoveries condensed into a small paper like that before us. To give its main contents, would be a translation; therefore extracts being impossible to make, we merely give an outline of the tendency of the author's work. He shows the development of the bones of the trunk and extremities from the second month of foetal life, when the first sign of ossification is observed, up to the twenty-sixth year, at which age the normal development of the bones is finished. He further demonstrates of how many points of ossification the bones of adults are composed, when the single points arise and join, and designs epochs for better illustrating the process of osseous development. The number of all the points of ossification in the human skeleton is fifteen hundred, of which five hundred are in the vertebræ, thirty in the sternum, one hundred and fifty in the ribs, six hundred in the ex-

tremities, forty in each shoulder and pelvis. The author proves that ossification is developed in longer periods than is usually believed, and that individual irregularities and deviations from the rule are not unfrequent; he confirms by his investigations some former, much doubted observations on the occurrence of vertebral epiphyses at the intervertebral junctures, of diaphyses in the transversal processes, etc.; and shows the existence of many new ones not before observed. Furthermore, he points out the time when fractures in the intermediate cartilage between the points of ossification are possible, and the relations of joints and ossification to each other are illustrated, and, finally, he shows at which time, and at what place, a fracture will be either an intracapsular or extracapsular. With considerable accuracy, he gives the measures and proportions of the pelvis of the new-born and the adult, and much industry and ingeniousness is shown in the manner in which the author makes use of the known progress of osseous development for the purpose of finding the age of individuals.

Before the commencement of ossification in any of the tubular bones, about fourteen days before the regular termination of pregnancy, the first ossified nucleus is found in the inferior epiphysis of the femur. This fact, as discovered by Beclard, in 1819, and again examined by Casper, Ollivier, and Mildner, has been made the subject of renewed examinations by Dr. BOEHM, who draws the following conclusions from one hundred and eighty-six cases: 1. The nucleus is not found in a feeble foetus of less than thirty-eight weeks. 2. In a well developed foetus, it is as large as one-twenty-fourth of an inch in the commencement of the tenth month of pregnancy. 3. It measures from one-sixth to one-fifth of an inch in a well developed infant at the regular term of its birth. 4. Its size is in proportion to the general process of nutrition and ossification. 5. Whenever it is found to be larger than one-fourth of an inch, the infant may be taken as having lived after birth. 6. Its size is growing with the development of the born infant. 7. Wherever the nucleus is absent, the foetus must not be considered older than thirty-six or thirty-seven weeks. 8. It resists putrefaction for a long time. 9. The body being wholly destroyed by putrefaction or other means, the femur will be sufficient to determine the age of the foetus.

Two bifid toes were exhibited before the Pathological Society of London, which had been removed from a child six years of age. There were seven toes on the foot before amputation; or, counting the two bifid toes as four, there were nine. The supernumeraries were situated at the inner side of the foot, about the normal position of the great toe.

In a child of two years of age, the entire radius was absent, as well as, so far as could be made out, its proper muscles. There was a wrist-joint; but the true radio-carpal joint was not perfect, nor was there any metacarpal bone of the thumb. The true thumb was therefore deficient, and the rudimentary finger in its place, was evidently not a thumb, but probably a second index-finger. It was removed by Mr. Erichsen. The left hand was twisted inwards, and quite loose at the wrist, as if paralyzed.

In the right arm of a child, as reported by Mr. Silvester, the radius was entirely absent. The upper part of the ulna, and the lower end of the humerus, were modified to compensate for the deficiency. The defective parts in the hand were the scaphoid, trapezium, and the metacarpal bones, and phalanges of the thumb. The pronators, supinators, flexors, and extensors in the middle of the arm were abnormal, but those on the ulnar side were normal. The hand was fixed in a prone position, and flexed to such an extent, that the radial side of the index finger lay adjacent to the radial side of the forearm. The left arm was more deformed. The scapula was well formed, except that the glenoid cavity presented the form of a hemispherical eminence. Little more than the lower extremity of the humerus existed, and a small cartilaginous nodule represented the radius. The carpus presented only the pisiform, cuneiform, and unciform bones; the metacarpus, the three inner bones. The little and ring fingers were persistent.

MR. HOUEL presented before the Academy of Medicine at Paris, a monster belonging to the family of pseudencephali, in which the following anomalies were found: 1. A nasal fissure, produced by the absence of the nasal bones, by division of the skin, and interposition of a peculiar tissue. This fissure was not exactly in the median line, but somewhat on the right side. 2. Absence of some fingers of the hands. Cicatrices being visible, Dr. Houel attributed these abnormalities rather to spontaneous amputation than to arrested development. 3. Fracture of the right leg, and wound of the left; the fracture being, in the opinion of Dr. H., effected by the umbilical funis. The pathological process is proved to have progressed slowly by the lateral peronæal muscles and the flexor muscles in general, even their tendons, being in a remarkable state of fatty degeneration.

DR. ADAM reports the case of a child, perfectly healthy in every other respect, in whom the patellæ are both wanting, and in their place is something like the poplitæal space, in place of which "latter is a kind of elbow, so that with this joint the child can make with its legs the same motions towards its head as with its arms."

Prof. BLASIUS remarks, in his reports on six cases of congenital angular curvature of the leg, that malformations of that part have the appearance as though they were the effects of mechanical violence, with the complication of external wounds. In all the cases the leg was bent in the shape of an angle and the skin looked as if cicatrized; in five the tibia was really inflected, in the sixth the lower end of the tibia was entirely absent. In each of the six cases there was such a malformation of the foot as is formed in a period of foetal life when no fracture is possible. In two cases the fibula was absent. Furthermore, the limb never reached its normal development in spite of prolonged and systematical exercise, the reverse of which is observed in cases of consolidated fractures. All these facts seem to prove that the deformity is dependent on a persistent deficiency of development. External injury during the course of pregnancy was reported in one case, denied in four. All the cases reported in literature are like these new ones. The possibility of fractures

in the uterus however, by external violence, cannot be denied, but pain of any kind proves nothing. In all the reported cases continuity has been interrupted, but consolidation has again taken place. That consolidation will not take place in every instance is proved by the cases of congenital rachitis, where consolidation is wanting on many different places. Sometime it is met with in different parts of the body. Deficiency of consolidation has been observed not only in the leg, but in the os femoris (two cases by Maas, and one by Schubert), and os humeri (one case by D'Outrepoint, one by Fuchs), none of them being produced by external influences. Rupture of the soft parts is also possible without external violence; in a case reported by Schubert one of the ends of the fractured os femoris penetrated the muscles and integuments for about an inch; it cannot indeed be considered as impossible, that soft parts should suffer in a similar manner as bones. It is true that the number of cases of congenital rachitis are not reported to have ever been complicated with perforation of the soft parts, but one of Prof. Blasius's cases is a proof of the possibility, as well as the cases of Schreiber's, in which a genuine formation of cicatrices was found. Cicatrices, however, are not always genuine, when the cutaneous tissue is drawn inwards; for sometimes there is but a deposition of fibrous tissue below the integuments.

Dr. RECKLINGHAUSEN asserts to have found by chemical tests, that there is no difference in the absolute amount and relative proportions of osseous substance—neither in old and young individuals, nor in old and new formed osseous substance, nor in compact and spongy bones. VALENTIN, who found that Phosph. calc. is not deposited directly but generated from carb. calc., etc., and further that the bones of the new-born, and spongy bones, contain a larger amount of carb. calc., than those of adults, and compact ones; and FRERICHS, and VON BIBRA, who found very large differences in the composition of compact and spongy bones, and even in the composition of several bones in the same skeleton, are simply told that they do not know how to remove the accessory elements, the peri-and endosteum, blood vessels, etc., from the osseous substance, in short that they do not know how to make chemico-physiological examinations.

Among the eminent German microscopists Prof. H. MUELLER has made himself very favorably known in a comparatively short time. The main points of his exceedingly able essay, as far as their relation to rachitis is concerned, are the following:

1. The first genuine osseous substance, that is formed in the interior of cartilages, takes its origin from the cartilaginous canals, in which osteoid masses are developed containing stellated cells. These become bones by deposition of earthly matter, the cartilaginous substance gradually disappearing. Such is the fact as well in the irregular (vertebral, tarsal) bones, as in the osseous nuclei of the epiphyses.

2. The first genuine osseous substance that is formed in tubular bones, takes its origin from the perichondrium, the inclosed cartilage gradually decaying, while medullary substance is formed. This is

done, in man, after preceding deposition of earthy matter ; in birds, frogs, etc., usually without it, genuine ossification within the periosteal osseous tubes commencing after the formation of medullar interstitia.

3. Where intracartilaginous ossification commences in rachitical bones, the deposition of earthy matter is deficient not only in the cartilage, but also in the newly formed osseous substance.

4. The shape of the medullar interstitia is abnormal in rachitis, the destruction of the original cartilaginous substance being incomplete.

5. Besides, a slow transformation of the cartilage takes place frequently instead of its normal and rapid decay.

6. The process of formation of the new osseous substance is frequently no less slow and incomplete.

7. In the abnormally persistent residues of the cartilage thick layers are formed round the cells.

8. In the interior of rachitical bones osteogeneous substance (osseous substance without earthy matter), is extensively formed, sometimes so much so as to render the bones flexible.

9. The rachitical alteration is most manifest in those parts of the tubular bones, where the first points of ossification originated.

10. Where the rachitical abnormalities of ossification are very considerable, mere cavities are formed in the cartilage with soft and not osteoid contents.

In merely pronouncing the name of the celebrated French specialist, Prof. BOUVIER, we are sure to direct at once the attention of the profession to these valuable works containing the results of his undoubtedly long and rich experience. The subjects treated of are so various and important, that we cannot attempt to give even the shortest review of their contents. Old and new facts, the results of former and of the author's own experience, described in a style as plain as it is elegant, render this work the best exposition on the principal deformities of the osseous and muscular systems. The atlas is as beautifully and carefully executed as the book is well written and of a scientific stamp. Our principal reason for abstaining from giving any further notices and extracts is, that all the matter contained in the book has been printed years ago, in French Journals, and is, since, generally known among the profession.

The same author makes the following remarks on the state of the viscera in scoliotic subjects : The curvatures of the vertebral bodies, of the spinal canal, of the spinous processes, and of the spine, are not proportionate to each other. The curvature of the canal is smaller than that of the vertebral bodies, and greater than that of the processus spinosi ; the flexion of the spine is diminished in each curvature, and, therefore, its functions are rarely disturbed. Considerable curvatures only may affect the spine, at last, so as to shorten it on the part of the concavity of the curvature ; if such is the case, the nerves on the same side are not in the like distance from each other, as on the convex side. The spinal nerves suffer least from the curvature of the column, for the intervertebral foramina remain almost always larger than the diameter of the nerves ; such are even the worst

cases, and, therefore, there is not much credit to be given to authors, who used to attribute several morbid symptoms, in scoliotic children, to the compression of the nerves. The *lungs* suffer very much. In curvatures to the right side the right lung is compressed, particularly in its posterior part, so much so as to be sometimes deprived of air; the posterior part of the mediastinum is drawn in an oblique, nearly transversal direction; the left lung is reduced to a smaller diameter, especially in the antero-posterior direction; somewhat less so in a lateral one. If the curvature is to the left side, the left lung is more compressed, because of the presence of the heart, than the right lung in the reverse case. The *diaphragm* extends higher into the thoracic cavity, more so on the right than on the left side, in consequence of both the dorsal and the abdominal curvature, which diminishes the abdominal cavity. It is easily understood, that the results of auscultation and percussion are very much modified by all these peculiarities of conformation. The *heart* is not affected by the pressure of the thoracic walls to such a degree as the lungs. Its size is very seldom reduced, more generally increased; fatty degeneration has sometimes been observed, but scoliosis does not seem to produce it. It was a general belief formerly, that the pressure of the thoracic walls on the heart was liable to endanger life; such is not the case, as in the worst cases of scoliosis the heart is found to be situated on the right side of the spine. Thus its situation, as that of the great blood-vessels attached more or less to the vertebral column and its neighborhood, may be altered in different ways. The *abdominal cavity* is greatly diminished in size, stomach and bowels are pressed downwards, and a great part of the intestines is situated between the walls of the pelvis. The *transverse colon* may, sometimes, become vertical; in some cases, observed by Cruveilhier, and Bouvier, it was situated between liver and diaphragm. The size of the *liver* is not always reduced; sometimes it is even greatly increased, but not so in every direction, because it gets its shape from the bones by which it is confined on every side. Its surface is very much disfigured by the adjoining parts of the body; on the posterior side the vertebral column, on the right lobe the ribs, on the lower surface the right kidney, leave the vestiges of their pressure. Thus, the shape is never equal in such cases; usually the right lobe of the liver suffers most; the more so, if the lumbar vertebræ are directed to the right side. It suffers less, when they are bent to the left side, because there is, in this case, more room for them. The *spleen* moves easier, and, so far, is more apt to avoid pressure. Nevertheless, its surface, in some cases, shows superficial depressions and excavations. The *kidneys*, adjoining the vertebral column, are much affected by its curvatures. When the first abdominal vertebræ are turned to the right side, the right kidney is lower than the left one, and vice versa. The kidney corresponding to the convexity of considerable lumbar or lumbo-dorsal curvatures, by being compressed by vertebræ and ribs, becomes longer, narrower, smaller in bulk and lighter in weight; the kidney corresponding with the concavity compressed superiorly and inferiorly, becomes shorter and broader, but keeps, at least, its



normal size. Similar remarks are made, after Bouvier, but certainly none of the same value, in the inaugural dissertation of Dr. GONTAY.

MR. BIGG'S volume is not strictly professional, but the work of a practical mechanic. A description of 75 different instruments is given, together with the theory of their action, and the manner in which they should be applied and adjusted. The mechanical appliances described are for deformities of the toes, of the foot, of the calcaneous ankle (tal. valgus, equinus, varus, calcaneus), of the leg, knee, and hip (curved tibia, genu valgum, contracted knee, and contraction of the hip-joint). The author comes to the conclusion that, unless mechanical appliances are constructed with a due regard to the anatomical and mathematical conditions of malformations, they will inevitably give dissatisfaction. This is a clear and intelligible, practicable book, and gives testimony of a fine mechanical talent, and good anatomical knowledge.

DR. FLEMING'S book is destined to explain, to the non-medical reader, the causes of curvatures of the spine and the means of preventing them. Although recommending no exclusive method, the author nevertheless gives the preference to the Swedish medical gymnastics.

Amongst 300 cases of scoliosis observed by Dr. EUBENBURG, 277 occurred on the right, 23 on the left side; 29 patients were of the male, 261 of the female sex. The causes of the disease was found in—

1. Deficiency of the muscular antagonism, in 264 cases.
2. Rachitis, in 14.
3. Scrofula and tuberculosis of the vertebræ, in 4.
4. Traumatic injuries, in 5.
5. Acquired shortening of one leg, in 5.
6. Congenital luxation of the femur, in 4.
7. Empyema, in 4 cases.

The commencement of the disease could mostly be traced to from the 7th to the 10th year; 69 girls had scoliotic mothers. Hereditariness being, therefore, unquestionable, like strabismus or hernia, an early prophylactic, gymnastic treatment is indicated.

In consequence of the frequent use of the right arm, the left one being neglected, the vertebral column becomes convex to the right side; the muscles of the left concave side, particularly the intertransversarii, are shortened, and those of the convex side stretched. This physiological fact becomes pathological by long duration; the curvature in the lumbar region, to the left side, is but compensatory. By customary standing on the right leg the muscles of the right hip are better innervated than those of the left. After an empyema has been cured by emission of the pus, there is a convexity corresponding with the healthy side. Rachitical scoliosis takes its origin before the sixth year, because rachitis heals, at latest, about this period; it is characterized, too, by swelling of the joints; and its curvature is somewhat different from what is usually seen, turning to the left in an unusually large arch. Scrofulous scoliosis has a peculiar, short angular inflection of some vertebral bones. It is seldom seen, while deviation backwards, of the vertebral bones, or



"*malum Pottii*," is a frequent occurrence. Alterations in the structure of intervertebral cartilages and ligaments are of secondary nature. Dr. Eulenburg objects to stretching apparatuses of any kind; his treatment is but gymnastical in the Swedish manner, alternating with repose on hard mattresses.

MR. COOTE'S investigations on lateral curvatures of the spine lead to the following conclusions: The muscles have no share in originating the deformity. But when the spine is curved, the muscles in the concavity contract like the string to a bow, and if they could act, they would increase the deformity. The deformity, once established, increases at different rates of progress, if unchecked through life. There is no age at which sufficient consolidation of the bones and ligaments occurs to secure the patient from increase of the evil. To effect a cure, the spine must be slowly pressed into its proper shape, and there held by means of instruments until the same adaptive process of contraction, which ensued in the deformity, reestablishes the figure. Therefore, any system based upon the development of muscular agencies is fundamentally wrong; when the spine is straight, and not before, can good result from the action of the extensor muscles. Although it be true, that in some early cases the deformity is very greatly lessened by the patient assuming the recumbent posture, yet experience teaches that want of exercise is followed by loss of tone, and impairment of general health; under which circumstances, the spine is little calculated to retain its normal form when the patient resumes the upright posture. Mechanical support must be constant and sufficiently firm to act upon the vertebral column; hence instruments must be strongly made.

DR. WEDL considers the nature of rachitis to consist in a diffuse and irregular formation of intermediate tissue, softening the osseous substance to such a degree as to allow a knife or pin to penetrate the osseous substance. Dr. Stiebel has proposed the opinion that the phosphate of lime, which is not soluble in water, is kept in the blood by means of organic acids, and directly introduced into the urine without participating in the formation of osseous substance. Dr. W., however, states that the relative absence of calcareous salts has not been proved, and rachitis being not a disease of the whole osseous system, but usually limited to some few bones, the general want of lime cannot be taken as existing from an anatomical point of view.

The proportion of rachitical children in Dresden is, according to Dr. Küttner, exceedingly great, the laboring classes being in a very wretched condition. Out of 9,000 patients admitted into the children's hospital for the last twenty years, 1,654 were rachitical, or had been so; of this number, 198 children belonged to journeymen shoemakers, and 162 to journeymen tailors, being 25 per cent. of the whole number. Twins, and children prematurely born, were rather numerous. The largest number were from two to three years old. Of the whole number, 387 had not had the breast, or had been suckled but a very short time; 360 were nursed for the usual period; and 455 for a longer time than usual. The largest number of rachitical children was noticed in the winter months. Küttner is inclined to believe, that the early use of much bread and potatoes increases the rachitical disposition.

In the opinion of DR. HAUNER, there is no certain mode of progress in the development of rachitis. It is observed, first and mostly, sometimes in this, sometimes in another organ. Cod-liver oil is considered by him to be the most reliable remedy, much more so than iron which has been so highly recommended of late.

DR. ROUTH recommends the syrup of the superphosphate of iron and lime as an excellent remedy in rickets and weak children with deficient osseous development. (Each ounce of the syrup contained 5 grains of iron and 5 of phosphate of lime.)

DR. BUDD gives rickety children 5 or 10 grains of phosphate of lime, in chalk mixture, 3 times daily, adding a single chalybeate if anæmia is palpably present. At the end of a fortnight, the improvement of the patient is generally conspicuous. Dr. Budd believes that the deterioration in the teeth is due to the insufficient supply of the inorganic constituents of these organs in the food of children, and suggests that children should be fed during dentition on biscuits containing a proportion of salts of lime.

The advantage of tenotomy in structural shortening of muscles, and consecutive limitation of movement and function of articulations, and deformity, cannot, in DR. LITTLE'S opinion, be exaggerated. The previously contracted, structurally shortened muscles, evince comparatively little tendency to recontraction after operation. On the contrary, especially during childhood, when the contracted articulation can be moved through a considerable portion of the natural range of movement, when the resistance is elastic instead of being rigid and unyielding, when the atrophy of the member does not amount to, or approach to, a loss of one-sixth (it is often as great as one-fourth) in its circumference, tenotomy is not required. The means by which, in such cases, tenotomy is superseded, are diligent, painstaking manipulations, appropriate mechanical supports, and appropriate exercise.

In PROF. SCHUH'S opinion, reposition of the luxated femur in coxarthrocace is mostly unsuccessful, for this reason, that the osseous margin is wanting which would have to retain the head of the bone after its reposition. Wherever the inflammation is gone, and the inflammatory productions are organizing, the leg may obtain a proper position by some apparatus, but the normal length cannot be obtained, as the organism will not tolerate a sufficient extension. Short duration of the disease, absence of abscesses, suddenness of luxation are favorable, and give a chance to trials of reposition.

DR. KLOSE reports thirteen cases of disjoining of epiphyses, observed in the course of eight years. The morbid process occurred once in the lower epiphysis of the os humeri, once in the upper epiphysis of the ulna, three times in the upper, and once in the lower epiphysis of the tibia, and seven times in the lower epiphysis of the femur. The disease is a necrotic process, with great tendency to pyæmia and death. Unless at an early period a cure is obtained by deep and long incisions, life will be saved by nothing except by amputation. This disease, meningo-osteophlebitis, as called by Dr. Klose, is similar to total necrosis in the tumefaction of the diseased part, in the partial or total necrosis, and in the isolation of the

epiphysis. The differential diagnosis between the two is given by the following statements :

## TOTAL NECROSIS.

1. Phlegmone, with fibrinous deposition below the periosteum.
2. Suppuration ; total supp. of the periosteum, and white necrosis.
3. Rapid destruction of the bone, with medullar cavity.
4. Pus destroys no soft parts, and osseous matter is formed anew around the necrotic bone.
5. Disease local.
6. Recovery.

## MENINGO-OSTEO-PHLEBITIS.

- Acute sero-fibrinous deposition below the periosteum, and in the soft parts.  
 Putrefaction ; Partial destruction of the periosteum, and black necrosis.  
 Slow destruction of the bone, while the med. cavity is still in normal action.  
 Soft parts destroyed, and no new formation of osseous substance.  
 Disease universal.  
 Pyæmia and death.

A girl of twelve years is reported to have suffered for six weeks from a dislocation of the radius, the dislocation being more outwards and slightly forwards, the common form being simply forwards. The reduction was accomplished, by simply extending the arm, breaking up any newly-formed adhesions, straightening, and then bending it.

The clinical reports of the English journals, particularly the *London Lancet*, are full of successful operations performed on the extremities of children of different ages. The large majority of these operations performed for diseases of the hip, necrosis of the tubular bones, swelling of the knee, etc., have been successful, and while stating that the subject is more of a surgical nature, than strictly belonging to our province, we must not omit to give our English brethren credit for their courage and their results. Mr. ERICHSEN, particularly, seems to have been very fortunate. Mr. EDWARDS operated on a child of fourteen weeks of age, whose left elbow joint had been inflamed, and an abscess had burst midway between the olecranon and inner condyle. The excision of the joint was performed ; it was almost completely disorganized, no cartilage remaining, except on the head of the radius, which was, however, removed. General health improved soon. Patient became able to move her arm freely, and the false joint was sufficiently flexible to allow of the thumb reaching the mouth.

The foetus described by Beale, had no neck, the head being stuck on top of the chest. The occipital bone was flattened down to the scapulæ. The brain was outside the skull—encephalocoele. The laminae of the vertebræ were wanting down to the upper part of the lumbar region, a thin shell of bone being thrown across to protect the spinal marrow ; there was no bulging of the contents of the spinal canal. A large, transparent, serous looking cyst, occupied the abdominal region, through which the liver and intestines could be distinctly seen ; the cyst contained a largish quantity of fluid ; the umbilical cord was inserted at the lower part of the right side of it, and not centrally.

A case of congenital luxation of the patella upwards, caused by the abnormal length of the *ligg. patellæ propria*, has been observed by Dr. RAVOTH. Two other cases have been published in *Deutsche Klinik*, 1858, No. 4, by Dr. Ravoth, and in No. 48 and 49 by Dr. Eulenburg.

MR. LYNCH attended a woman who fell, in the eighth month of her pregnancy, against a piece of wood, and had an easy confinement after suffering for a week. The child was dead, and had a large contused wound, from the os sacrum to the occiput, of three inches in a transverse direction. Skin and muscles were torn off the vertebræ and ribs. The wound was covered with a pellicle of organizing lymph, and the margins proved to be in the commencement of cicatrization.

A mild example of wry-neck has been observed at King's College Hospital, London, in a little girl. The deformity existed at birth, and depended upon contraction of the lower part of the sterno-mastoid muscle, which had become attached to the deep fascia of the neck. A cure has been effected by subcutaneously dividing the muscle. There was not a drop of blood lost.

Congenital absence of the latissimus dorsi was observed in a young man. Part of the pectoralis major was also absent; and, as a compensation for both deficiencies, the teres major was considerably hypertrophied. The malformation, though causing a great change in the shape of the shoulder, did not cause much impediment to movement; the incomplete arm was, however, weaker than the other.

MR. BIRKETT removed from either side of the neck of a girl of seven years of age two growths, which appeared to be intimately associated with the fibres of the platysma-myoides, not dipping deeper than this structure, and being entirely cutaneous appendages. After a section was made in the long axis of each growth, the tissues of the lobe and of the fibro-cartilage of the auricle were clearly distinguished.

In MR. NUNN's case of talipes equinus paralyticus in an adult, the head of the femur was flattened, the shaft not larger than that of a child of seven or eight years, the cotyloid cavity very shallow, with some thickening at its outer and lower margin, the tuber ischii was, in a great measure, undeveloped.

In a case of DR. RAMSKILL, the umbilicus was a little to the right of the median line, and the left side was larger and "wider every way than the other. On the left side stomach and part of the intestine were quite prominent. Probably there was congenital deficiency of a large portion of one or both of the deeper muscles of the abdominal parietes!"

DR. STEGER, reports the case of an infant, whose perineum was cleft from the symphysis pubis to the os coccygis, in nearly a direct line, and the greater portion of whose bowels protruded, surrounded by the peritoneal sac.

It is a remarkable fact, that a subject of great pathological importance should be treated by two distinguished men, in two different countries, with the like care, ability, and success, at the same time. Either of the works, the titles of which are given above, will not fail to enrich science and to confer honor on their authors, and singularly enough, in many instances by the same facts, examinations, and ideas. If there was a necessity to prove such an assertion, this coincidence, like many others known in the history of medical science, would be a proof of, as it were, a scientific atmosphere existing in the scientific world, and surrounding all the cultivated

minds. Like wants appear to produce like exertions and like results.

Neither of the books referred to falls entirely under the head of our review ; but we thought proper to give some facts from both, in order to show the relation of muscular paralysis to the essential paralysis of children, as set forth in the book of Professor Vogt ; the more so because 13 cases of the 105 reported by Dr. Roberts occurred in children of 14 years and under, and 3 new cases, introduced by Dr. Friedberg, occurred in boys of 1½, 6, and 13 years of age.

Contrary to the anatomical cause of essential paralysis, we learn, from the examinations of our authors, that

1. The gray substance of the spinal cord may be extensively diseased without progressive atrophy of the muscles existing.

2. In some cases of this disease other parts of the spinal cord have been found diseased, the gray substance being normal.

3. In some cases of general muscular atrophy (40 out of 105 cases collected by Roberts belong to this class) and paralysis of the entire muscular system, the spinal cord and the roots of the spinal nerves have proved entirely normal.

4. Therefore, degeneration of the roots of the spinal nerves must not be taken to be the cause of paralysis consequent on muscular atrophy.

Neither of our authors thinks the name of the disease, as proposed by Aran, "*atrophie musculaire progressive*," a good one. Friedberg would propose the name of "*paralysis from alienated nutrition of the muscles*," but prefers simply "*muscular paralysis*;" Roberts thinking "*idiopathic degeneration of the voluntary muscles*," somewhat lengthy, although physiological, suggests simply "*wasting palsy*," or "*Cruveilhier's atrophy*," after the writer who has taken the most prominent part in elucidating its history.

The seat of the disease is proved neither to be in the vascular system, nor in the spinal cord, nor in the anterior roots, nor in the peripheral distribution of the nerves, nor in the sympathetic nerve. It must, therefore, have its seat in the muscles ; and such is the opinion of Duchenne, Aran, Oppenheimer, Wachsmuth, Meryon, Roberts, and Friedberg ; and it consists "*in a fatty and granular degeneration of the muscular fibre, similar (often, at least) in its anatomical bearings, to what is observed in fatty heart, or in muscles which have degenerated from section of their nerves. There would seem to be an error of nutrition in the muscular fibre, not dependent, as Dr. Meryon thought, on a general depression of the nutritive functions—these being almost always in their highest perfection—but brought about under the influence of a peculiar constitutional predisposition or diathesis.*"—(Roberts, p. 175.) The single causes are best set forth by Dr. Friedberg, who thinks muscular paralysis to be very generally the result of inflammation of the muscle or a similar process. He discerns the following six divisions, according to the principal causes of degeneration :

1. Propagated myopathic paralysis. The nutritive trouble is propagated to the muscle from a neighboring organ.

2. Traumatic m. p.

3. Rheumatic m. p.

4. Dyscrasic m. p., from cholera, dysentery, scurvy, syphilis, typhus, exanthems, puerperal state, rachitis and osteomalacia, lead disease, and hereditary influence.

5. Marastic m. p., in consequence of deficient circulation of the blood and suppressed muscular motion, from bandages surrounding a limb for a long time, immobility of the joints (induced by organic disorganizations, cutaneous cicatrices), pressure upon each other of the muscular particles approximated after luxations, old age, disease of blood-vessels and thrombosis, tumors, diminution of nervous influence.

6. Simple m. p., where there is a nutritive trouble without a manifest cause. Many cases of essential infantile paralysis have falsely been brought under this head.

Thus it appears, that the discrimination between essential paralysis of children and muscular paralysis is well shown. We omit, as not pertinent to our object, to enter any further into the discussions of our authors, only stating, at last, their similar views as to therapeutics.

Remedies applied to the vertebral column, etc., are out of the question, because there is no disease of the nervous centres. Remedies acting on the system at large, are successful in such cases only where the constitution is affected by syphilis, scrofula, etc. There are two unquestionable remedies, viz., methodical exercise, and cold mineral and douche baths, which, however, when the disease is still in active progress, are more likely to do injury than promote recovery. Besides thermal and sulphur baths, frictions, with stimulating liniments, and Faradization, may be relied on. A rational treatment ought to be commenced within as early a stage as possible, and the exciting causes, as overwork, must be strictly avoided. Where contractions are, according to Friedberg, the exciting cause, they must be treated by electricity, methodical exercise, and gradual stretching, when flexible; in cases of inflexible curvatures, machinery, knife, and brisement force have to commence the treatment. For particulars, we refer our readers to Dr. Roberts' and Dr. Friedberg's books, either of which we again take the occasion to recommend to the profession.

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Hauschild, E. J., *Die leibliche Pflege der Kinder zu Hause und in der Schule*. Leipzig, pp. 194. Mit 40 Abbildungen. (*The physical education of children, at home and at school*. With 40 drawings.)